

Number 51

March
2006



Ecology & Environmental Management IN PRACTICE

Bulletin of the Institute of Ecology and Environmental Management

Will Planning Policy Statement 9 make a Significant Contribution to Sustainable Development?

Dr Lincoln Garland MIEEM and
Dr Mike Wells CEnv MIEEM

Introduction

In 1987 the World Commission Report on Environment and Development (the Brundtland Commission) defined sustainable development as '*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*'. Sustainable development is now usually defined as human activity with balanced economic, social and environmental goals (Oxford, 2000). Many authors, however, have criticised such working interpretations of '*sustainable development*' for

their anthropocentricity. For example, in the so-called '*Hannover Principles*' prepared for the World Expo in 2000, William McDonough, a leading exponent of sustainable development and design in the USA, stated that:

'In order to embrace the idea of a global ecology with intrinsic value, the meaning [of sustainable development] must be expanded to allow all parts of nature to meet their own needs now and in the future.' (William McDonough & Partners 1992).

Their suggestion is that by focusing primarily on the needs and rights of man as the key goal of sustainable development, and reinforcing the widely held conceit that other species exist merely to serve man's needs, we are unlikely ever to achieve truly sustainable development.

Unfortunately, biodiversity and new development have historically been in direct confrontation. Development that has caused net harm to biodiversity and nature conservation interests has without doubt been more the rule than the exception (Oxford 2000); and this has continued despite the Brundtland Commission report. Many other authors have since agreed that conservation and enhancement of biodiversity should be a fundamental component of sustainable development (RSPB 1996 and 2005, Oxford 2000, Christie *et al.* 2002). It has also been emphasised that sustainable development ultimately depends on *cooperation* between developers and planners, rather than competition, avoiding the '*winner - loser*' scenario



Created intertidal reedbeds along the Greenwich Peninsula, London. National BAP priority species supported include smelt and linnet.

Ecology and Environmental Management

In Practice No. 51, March 2006. ISSN 0966-2200

Editor for this issue: Jim Thompson.
 Assistant editor for this issue: Jason Reeves
 Photo Credits: Gavin Parsons and Ross Bower

In Practice is published quarterly by the Institute of Ecology and Environmental Management. It is supplied to all members of IEEM and is also available by subscription (£30 per year, UK; £40 overseas).

In Practice will publish news, comments, technical papers, letters, Institute news, reviews and listings of meetings, events and courses. *In Practice* invites contributions on any aspect of ecology and environmental management but does not aim to publish scientific papers presenting the results of original research. Contributions should be sent to the Editor at the IEEM office (address below).

Opinions expressed by contributors to *In Practice* are not necessarily supported by the Institute. Readers should seek appropriate professional guidance relevant to their individual circumstances before following any advice provided herein.

Advertising: Full page: £400, half-page: £200, quarter-page: £100, eighth-page: £50. The Institute does not accept responsibility for advertising content or policy of advertisers, nor does the placement of advertisements in *In Practice* imply support for companies, individuals or their products or services advertised herein.

Contents

- 1,3-7 Will Planning Policy Statement 9 make a Significant Contribution to Sustainable Development?**
Lincoln Garland MIEEM and Mike Wells CEnv MIEEM
- 8 Herpetofauna Workers' Meeting**
Jon Cranfield AIEEM and John Baker MIEEM
- 9 ZSL Scientific Meeting**
Jason Reeves AIEEM
- 10-11 Ecological Networks**
Linda Yost CEnv MIEEM
- 12 A New Road to Travel** *Michael Starrett*
- 13 South West Section Launch**
Irish Members' Survey
Mieke Muyliaert CEnv MIEEM
- 14 Irish Conference**
Scottish Newsletter
- 15-16 North West Section Field Meeting**
- 16 North West Section Moving On**
- 17 North East Section Event**
- 18 Records - Two Sides to the Story**
- 19 IUCN News**
- 20 EFAEP News**
- 21 Society for the Environment News**
- 22 Basil O'Saurus**
- 24-26 Institute News**
- 27 Recent Publications**
- 28-33 In the Journals**
- 34 News in Brief**
- 35 Prospective and New Members**
- 36 Diary**

Institute of Ecology and Environmental Management

Executive Director: Dr Jim Thompson Deputy Executive Director: Linda Yost
 Membership Officer: Anna Thompson Education Officer: Nick Jackson
 External Relations Officer: Jason Reeves
 Patrons: Prof. David Bellamy, Prof. Tony Bradshaw, Sir Martin Doughty, Prof. Charles Gimingham, Mr John Humphrys, Dr Duncan Poore, The Earl of Selborne & Baroness Barbara Young
 President: Dr Chris Spray Vice-President: Dr Eirene Williams
 Secretary: Dr Janet Swan Treasurer: Dr Alex Tait
 IEEM aims to raise the profile of the profession of ecology and environmental management, to establish, maintain and enhance professional standards, and to promote an ethic of environmental care within the profession and to clients and employers of the members.
 IEEM Office: 45, Southgate Street, Winchester, Hampshire, SO23 9EH.
 Tel: 01962 868626, Fax/Ans: 01962 868625.
 Email: enquiries@ieem.net
 Website: www.ieem.net
 IEEM is a Company limited by guarantee, no. 2639067.

MEMBERSHIP

Full £110 (outside UK: £80) Associate £75 (outside UK: £55)
 Retired £50 Affiliate £50 Student £20

Full membership is open to those with three years' experience, and Associate membership with less experience. Appropriate qualifications are usually required. Details are given in the Membership criteria.

The membership year is 1 October – 30 September.

Original design by the Nature Conservation Bureau Limited. Tel 01635 550380.

In Practice is printed on Revive Silk, a 75% recycled paper (35% post consumer).

© Institute of Ecology and Environmental Management

The world of Natural History Media is buzzing with the latest David Attenborough Series – *Planet Earth*. Now readers of *In Practice* will know of the legendary perspicacity of our very own Professor Basil O'Saurus. I can tell our readers that weeks before journalists started to question our real motives in watching wildlife our Basil had it all worked out. Turn to page 22 for further revelations! Notwithstanding the dark side of natural history viewing, we have a brilliant series which will raise awareness of biodiversity just at the time when it is under threat as never before. The battle is by no means won in getting the message across of the extent to which this superbly portrayed biodiversity is under threat and IEEM members have a role to play in this.

Contrast the TV series with the absurdity that the Natural Environment Research Council is to cut the funds to the Centre for Ecology and Hydrology centres by £4 million. The consequences are understood to include:

- closure of the Banchory, Monks Wood and Winfrith research centres as well as the Environmental Microbiology laboratory in Oxford and CEH's administrative headquarters in Swindon;
- up to 150 scientist positions and 80 support staff lost;
- consequent loss of knowledge, expertise and research capability - a vital resource for Government, NGOs and biodiversity focused businesses;
- £45 million restructuring costs to reduce annual costs by £2.1 million.

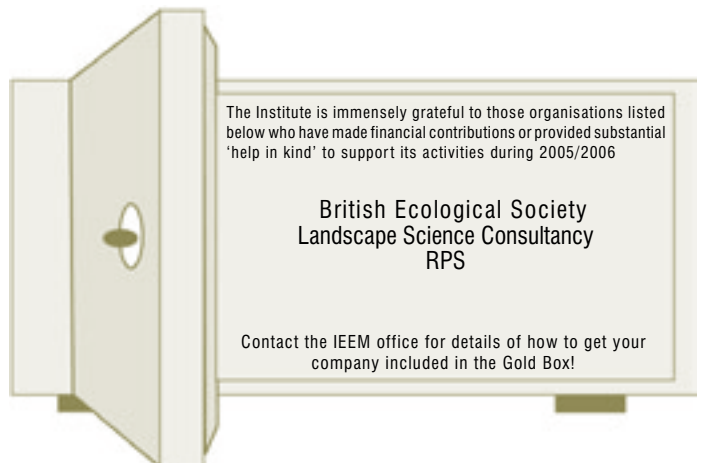
These centres have underpinned the research on the environment, on ecosystems and land management systems for many years, are highly respected nationally and internationally and very often undertake vital long term studies which others are not now equipped to carry out. The CEH centres occupy a special place in UK ecology and are crucial to the ability of the UK to deliver biodiversity commitments nationally and internationally. There are several closely connected issues dependent on the CEH centres:

- long-running strategic projects and monitoring;
- strategic research capability available to Government;
- security of vital data notably the Biological Records Centre;
- expertise available to Government, NGOs and industry;
- science diversity, world class science and not concentrating all research in universities;
- standing and influence of ecologists and environmental authorities and effect on professional ecologists.

The UK government has signed up to the objective of halting the loss of biodiversity by 2010 and endorsed it at the Malahide Conference in 2004. We are constantly being reminded of the threats from climate change to biodiversity, habitat and species loss and sea level rises and yet the body which is so superbly well placed to provide some of the vital scientific background to these issues is to have its resources cut. There is widespread recognition that the costs of climate change will be enormous so for a saving of £4 million it is proposed to jeopardize one of our best tools available for dealing with some of the consequences. A better example of a short-term gain to the detriment of our clear long term needs would be hard to find.

Jim Thompson

P.S. The objections have produced little. The stations will close but 40 jobs have been saved.



The Institute is immensely grateful to those organisations listed below who have made financial contributions or provided substantial 'help in kind' to support its activities during 2005/2006

British Ecological Society
Landscape Science Consultancy
RPS

Contact the IEEM office for details of how to get your company included in the Gold Box!

(William McDonough and Partners 1992, RSPB 1996, 2005, Countryside Agency 2000, Oxford 2000). In other words, the new clarion call is for planning to ensure that development is 'good enough to approve' as opposed to being 'bad enough to refuse' (Countryside Agency 2000).

Even quite recently, however, the UK Government's twelve key requirements of a sustainable community, as set out in *Sustainable Communities: Building for the Future* (ODPM 2003), appeared to back-track and set out a view of sustainable development very much from a human perspective, without explicit mention of the importance of protecting or enhancing biodiversity.

It is, therefore, very much to be welcomed that a stated principal objective of the recently published *Planning Policy Statement 9: Biodiversity and Geological Conservation* (PPS9; ODPM 2005) - and also an objective of *PPS1: Delivering Sustainable Development* (ODPM 2005) - is the need for the planning system in England to promote sustainable development in the context of biodiversity.

Wherever relevant to individual planning applications, the policies in PPSs and also the remaining Planning Policy Guidance Notes (PPGs), are a material planning consideration. The Planning and Compulsory Purchase Act 2004 established the new development plan system of Regional Spatial Strategies (RSSs) and Local Development Frameworks (LDFs), and requires these plans to be consistent with the national policy framework set out in the PPSs and PPGs. One of the key requirements when developers are planning a new scheme is to check at the earliest stage that it is in keeping with these development plans. Where this is not the case planning permission should be refused unless there are 'material considerations' to indicate otherwise. Hence PPS9 should, *in theory*, have a significant effect in promoting sustainable, biodiversity-affirming, development.

The key question addressed in the present paper is whether PPS9 will actually achieve this *in practice*, and what factors may oppose or limit its success?

The route to PPS9

PPG9 *Nature Conservation*, in place since 1994, became increasingly out of date as a result of new legislative interpretations through case law, challenges through the European Court of Justice¹, and new legislation (Baker 2005). The focus of PPG9 was very much on species and habitats protected under the Wildlife and Countryside Act 1981 and the Habitats (Nature Conservation &c.) Regulations 1994; (The Habitats Regulations). PPG9 included little requirement for planning authorities (Regional Planning

¹ For example, the European Court of Justice has ruled that the Habitats (Nature Conservation &c.) Regulations 1994 do not apply the provisions of the EC Habitats Directive with regard to development plans in Great Britain. Appropriate Assessment may now be required for certain RSSs and LDFs in relation to European protected wildlife sites. In addition to amending the Habitat Regulations the UK Government might also need to amend Circular 06/05 (discussed in this article) that accompanies PPS9 and repeats this incorrect interpretation.

Bodies (RPBs) and Local Planning Authorities (LPAs)) to use the planning system to improve conditions for wildlife.

According to Oxford (2000) a key shift in the agenda towards maximising opportunities for wildlife, the 'net gain' approach, occurred with the publication of the UK Biodiversity Action Plan (BAP) (HM Government, 1994). This was reinforced by the Countryside and Rights of Way (CROW) Act 2000, which introduced a statutory duty for Government to promote steps 'to further the conservation' of habitats and species listed in Section 74 of the Act. This is a listing of the UK BAP priority habitats and species.

This new focus on biodiversity enhancement is part of wider focus on 'making things better', set out in Part 1 of the Local Government Act 2000 and Greater London Authority Act 1999. These Acts place a duty on each

key authority in England and Wales to prepare a 'Community Strategy' to promote and improve the economic, social and environmental well-being of their areas and to contribute to the achievement of sustainable development in the UK.

Subsequently, the UK Biodiversity Strategy *Working with the Grain of Nature: a Biodiversity Strategy for England* (DEFRA 2002) 'put more flesh on the bones' of biodiversity enhancement policy, by setting out how this change of emphasis might be achieved.

Supporting documents to PPS9

The new PPS9 is accompanied by two much more detailed documents:

1. The *Government Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System* (ODPM & DEFRA 2005) provides guidance on the application of the law relating to planning and nature conservation in England.

2. *Planning for Biodiversity and Geological Conservation: a draft Good Practice Guide to PPS9*² uses case studies and examples to provide good practice guidance as to how regional planning bodies and local planning authorities should best implement the

national policies in PPS9 and also adhere to legal requirements presented in the Circular.

Key advances made in PPS9 and the supporting documents

'Furthering' interests of UK priority BAP habitats and species and 'considering' other BAP species in both planning policy and development control

The word 'enhance', and synonyms for it, are included at least 13 times in PPS9 and numerous times in the draft *Good Practice Guide*, which one might hope is a testament to the importance the Government now places on this new approach to nature conservation.

The draft *Good Practice Guide* cites many examples of best practice with

² The *Good Practice Guide* was not published at the time this article was written, although a draft copy was provided to the authors for review.



Planted deadwood as habitat for saproxylic invertebrates. London BAP priority species eventually supported include Stag Beetles.

regard to planning, and nature conservation and enhancement, e.g. The London Wetland Centre at Barnes where, through a planning permission for housing, an opportunity was taken to provide the world's largest metropolitan wetland nature reserve in the heart of London.

More importantly, however, while there is already a statutory duty for Government to 'have regard' to the conservation of priority species and habitats under Section 74 of CROW, what this is to mean in practice is now stated much more clearly and specifically in PPS9 and the associated Government Circular. There is now a stated requirement that key national, regional and local BAP objectives and targets should also be incorporated into RSSs and LDFs. In terms of the assessment of planning applications, PPS9 Para 14 states (emphasis added):

*'Development proposals provide many opportunities for **building-in beneficial biodiversity** or geological features as part of good design. **When considering proposals**, local planning authorities should **maximise such opportunities in and around developments**, using planning obligations where appropriate.'*

Specifically in relation to Para 14, the associated circular (ODPM and DEFRA 2005) states:

'In PPS9, the Government has indicated that local authorities should take steps to further the conservation of habitats and species of principal importance through their planning function (see PPS9 paragraphs 11 and 14). The lists of the habitat types and species subject to this duty were published by DEFRA in 2000 and comprise the list of species and habitats identified as priorities under the UK Biodiversity Action Plan.'

Taking these parts of PPS9 and the Circular together, Planning Authorities are now required to actively seek in development proposals measures that aim to promote appropriate priority habitats and species listed in the UK BAP and, in accordance with CROW, treat these as 'material considerations' as they have in the past treated species protected under the Wildlife and Countryside Act and Habitats Regulations.

It is further stated in Para 84 of the Circular (emphasis added) that:

*'The potential effects of a development, on **habitats or species listed as priorities in the UK Biodiversity Action Plan (BAP)**, and by **Local Biodiversity Partnerships**, together with policies in the **England Biodiversity Strategy**, are capable of being a **material consideration** in the preparation of regional spatial strategies and local development documents and the **making of planning decisions**.'*

Para 86 of the Circular also states of local BAPs:

'outside London, these plans are amongst the elements local authorities should build upon when preparing the overarching (Community) Strategy required by Section 4 of the Local Government Act 2000'

Local BAP species and habitats may well, therefore, be much more than just 'material considerations' in some cases of development control. Some Local Authorities may even make development planning gain the key mechanism for achieving local BAP targets.

Protection of non-statutory sites

PPS9 provides greater emphasis on protection of sites without statutory protection. In particular, there is a presumption against developments that would impact on ancient woodland and aged or veteran trees found outside ancient woodlands.

The Habitats Regulations require planning polices to encourage the management of features of the landscape which are of major importance for flora and fauna such as: rivers and their bank sides, traditional field boundaries, and ponds and small woods. PPS9, however, goes further, highlighting the risks of habitat fragmentation and isolation, and stating that these habitat networks should be 'protected from development'.

Development of brownfield sites

As part of encouraging sustainable communities, the Government has a target of constructing 60% of new housing on previously developed land (ODPM 2003), a policy also reflected in PPS9, which states that *'the re-use of previously developed land for new development is a major contributor to sustainable development'*. While the Government policy of including the proportion of brownfield land redeveloped for housing as an indicator of sustainable development, is being questioned (Nicholson-Lord 2003), PPS9 Para 13 does state that:

'where such sites have significant biodiversity and geological interest of recognised local importance, local planning authorities, together with developers should aim to retain this interest or incorporate it into any development of the site.'

This provides a clear steer in the direction of either *in-situ* conservation or habitat recreation for brownfield biodiversity within development. The draft *Good Practice Guide* provides several examples as to how this can be done, e.g. vegetated roofs, and also recommends making reference to the increasing range of green urban design guidance when implementing this policy (see Town and Country Planning Association 2004a).

Proposals based on up-to-date information

LPA's can request developers to include 'further information' in Environmental Statements under Regulation 19 of The Town and Country Planning (Environmental Impact Assessment) Regulations 1999. Where 'further information' is not provided or is insufficient a planning application can be refused.

While this is a powerful regulatory tool for LPA's in the case of Environmental Impact Assessment (EIA), PPS9 builds on this, requiring planning authorities to base all planning policy and new development decisions on *'up-to-date information about the environmental characteristics of their areas'*. The 'environmental characteristics' are defined as *'the relevant biodiversity resources of the area'*. The draft *Good Practice Guide* considers this *'up to date information'* to include an appreciation of *'those natural features distinctive to their area, their distribution and extent, and the trends affecting them.'*

The draft *Good Practice Guide* emphasises this requirement further stating:

'Where a development poses a likely risk of harm to a protected or priority BAP species, local planning authorities must ensure that the results of adequate survey is carried out in advance of a planning application. The planning application must be submitted with the results of this survey and show how the proposal has taken this evidence into account through its design and any mitigation or compensation proposed.'

Whilst it is understandable that developers may wish to avoid excessive expenditure on surveys before outline planning permission has been secured, the potential for conflict between such a permission and biodiversity conservation, in the face of particular survey findings (such as in the case of European-protected species), has now been deemed unacceptable. To avoid such difficulties, pre-application negotiation with ecologists and environmental officers within planning authorities will be increasingly important, to ensure that planning applications are submitted with sufficient baseline ecological data.

Alternative options

Developers are legally obliged under the Habitats Regulations to consider alternative solutions where there is a threat to the integrity or conservation status of a European-protected site or species respectively, and also in EIA in accordance with The Town and Country Planning (EIA) Regulations 1999. This approach is also considered good practice in respect of valuable features not protected under European law or being assessed as part of an EIA (IEEM 2006).

In accordance with PPS9 developers must now also be able to demonstrate that they have considered alternative options to prevent 'significant harm' to 'biodiversity interests.' Our reading of PPS9 and also the draft *Good Practice Guide* is that 'biodiversity interest' refers not only to species and habitats already protected under the Wildlife and Countryside Act and the Habitat Regulations, but also to national, regional and local BAP priority species and habitats, Local Sites (e.g. County Wildlife Sites), and the non-designated sites described above.

Importantly, PPS9 goes further in relation to biodiversity interests, recommending in Section 1 (vi) that where 'significant harm cannot be prevented, adequately mitigated against, or compensated for, then planning permission should be refused.'

Protection of badgers

PPG9 stated that the presence of badgers, as with other protected species, was a 'material consideration' when a LPA is considering a development proposal. Para 124 of the Circular accompanying PPS9, now defines this expression with regard to Badgers as:

'the likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations.'

Disturbance should obviously be considered in accordance with the Protection of Badgers Act 1992. Also, most consultants and planning authorities, it is assumed, already consider the potential risk of increased badger road/rail casualties that may result from development. Nevertheless, the new formal requirement in PPS9 to also consider the foraging requirements of badgers in relation to development is noteworthy.

Geological/geomorphological features

In PPG9 'nature conservation' was assumed to include geological/geomorphological features. Following the 1992 Rio Earth Summit, however, at which the UK Government signed the *Convention on Biological Diversity*, nature conservation has become increasingly synonymous with biodiversity. Accordingly it has been argued that the conservation of geological/geomorphological features has received inadequate attention (e.g. Tyldesley 2005). To address this, PPS9 now incorporates 'geological conservation' in the title, and the phrase is included in tandem with 'biodiversity conservation' throughout the document.

How effective will PPS9 be in securing biodiversity conservation and enhancement?

The authors view PPS9 as a significant step forward and urge that designers, planners and consultants should now make every effort to seek a collaborative approach to achieve integration of biodiversity into development. Nevertheless, despite the excellent advances the authors would point out potential shortcomings of PPS9 (and associated documents), as well as the planning system, which may inhibit the ability of PPS9 to significantly contribute to truly sustainable, biodiversity-affirming, development.

Monitoring

Important improvements to the planning system may be meaningless without guaranteeing that policies and decisions are implemented and enforced (Christie *et al.* 2002). In particular, the implementation of planning conditions is rarely checked by LPAs (Town and Country Planning Association 2004b). Planning conditions also often lack sufficient technical detail with respect to ecological mitigation, compensation and enhancement requirements, to guarantee a high standard of implementation. PPS9 does not include any reference to the importance of either strengthening the ecological content or monitoring the enforcement of planning conditions, although this is covered briefly in the draft *Good Practice Guide*.

The imposition of planning conditions and Section 106 agreements, under the Town and Country Planning Act 1990, provide a mechanism for LPAs to require developers to monitor the success or otherwise of their mitigation, compensation and enhancement measures. Such conditions and agreements, however, are rarely used for this purpose, an issue not addressed by PPS9.



Created Pond. National BAP Priority Species supported include great crested newts.

There are other monitoring mechanisms in place that may help to fill these gaps to some extent. In accordance with PPS11 and PPS12, there are various mechanisms to monitor the success of RSSs and LDFs in achieving biodiversity commitments through the establishment of clear and measurable targets and milestones. In particular Sustainability Appraisal, which is mandatory and runs through the entire process of RSS and LDF preparation and implementation, aims to ensure that plans are in keeping with the principles of sustainable development. The other key measure of policy implementation that planning authorities have to undertake is the Annual Monitoring Report, which in terms of biodiversity is based on Government Core Output Indicators (ODPM 2005). These Core Output Indicators are to measure change in areas and populations of biodiversity importance.

These mechanisms do not, however, provide any specific mechanism for monitoring the effectiveness of planned mitigation and enhancement in individual developments. The evolution of EIA process and procedures moves constantly towards closing this gap, with improving guidance on Section 106 Agreements and emphasis on production of Environmental Action Plans, which make the writing of conditions much easier for planners. Nevertheless, standards in practice still vary widely. This lack of a legal requirement for mitigation and enhancement monitoring in all cases creates scope for developers to overlook mitigation and enhancement promises, and a temptation for planning authorities to perhaps pay less than full attention or turn a blind eye towards the environmental commitments of certain developments that, for example, promise many new jobs.

How much enhancement?

The amount of biodiversity enhancement required in relation to individual developments is unclear, as it will need to be negotiated on a case-by-case basis. Although planning authorities will be expected to help meet BAP targets as set out in RSSs and LDFs, and many recommendations and

good examples of enhancement are included in the draft *Good Practice Guide*, it is still uncertain how planning authorities will consistently quantify the scale and quality of ecological enhancement required in order to meet policy targets in relation to individual developments. Likewise developers and consultants are also likely to be unsure of what is expected of them and how it will affect design and costs.

Given the welcome emphasis on biodiversity enhancement in PPS9 and the draft *Good Practice Guide*, a clear definition of enhancement would have been useful. For example Oxford and McArthur (2000) view enhancement as improving the overall ecological quality, extent, capacity, structure and functioning of a site and the surrounding network of sites and features. Enhancement, as well as restoration and compensation, should also be in keeping with the surrounding landscape (Oxford 2000).

The requirement for ecological enhancement is qualified in PPS9 in several places by 'wherever possible' or 'where possible.' If planning authorities do not have adequate ecological expertise to advise them on such matters (see below), some developments may well be approved that interpret these caveats in ways that offer few tangible enhancements.

Protection of effectively irreplaceable habitats

Sustainable development should mean that development and protection of the environment are integrated, progressing together and avoiding the 'winner - loser' scenario. Exceptions to this principle in PPS9, such as permitting development that adversely affects ancient woodland in cases where the 'benefits of the development ... outweigh the loss,' suggest that this new philosophy has still not been fully embraced. It is hard to envisage any situations where the loss of ancient woodland could be adequately compensated, as the biotic communities present are effectively not replaceable within reasonable timescales and the historical associations of such woodland (now reduced to approximately 1% of the cover present 400 years ago) are an absolutely irreplaceable part of our cultural heritage. In such situations any additional biodiversity enhancement measures cannot ever really offset the adverse ecological impacts, and hence permitting damaging development in such cases contravenes even the existing 'no net loss' principle (Oxford 2000, Christie *et al.* 2002). Such caveats also appear to contradict other requirements of PPS9 such as the guidance that development damaging to biodiversity interests that cannot be adequately mitigated or compensated for, should be refused.

It should be noted that this concern applies as much to other ancient habitats (e.g. ancient meadows) as it does to ancient woodland. Most are UKBAP priority habitats and so are afforded protection under CROW and also Para 11 of PPS9. It is perhaps unfortunate, however, that these other ancient habitats have not been specifically highlighted by PPS9.

Are there sufficient resources to ensure implementation?

Prior to PPS9 planners were frequently being expected to make decisions on technical ecological issues in the absence of all the necessary data and defined goals (Christie *et al.* 2002). Collation of comprehensive ecological data (a term used in the draft *Good Practice Guide*), and preparation and implementation of meaningful objectives and targets, will further burden financially stretched councils, as it appears that the resource implications of PPS9 will need to be met within existing budgets.

The draft *Good Practice Guide* recommends that 'access to in-house or shared expertise in ecology will improve the capacity of planning authorities to evaluate environmental information and make informed planning judgements.' Only c. 35% of LPAs, however, employ an ecologist or biodiversity officer (Mike Oxford pers. comm.). Unless increased resources are made available to ensure that experienced, up-to-date, professional ecologists are in place to advise planners regarding interpretation and implementation of new biodiversity policy, successful implementation of many of the important policy advances, and the goal of truly sustainable development, will be severely compromised.

Conservation BAP-style?

While most people have welcomed the arrival of BAPs and also their formal incorporation into the planning process through PPS9, some have suggested (e.g. Marram 2002) that the increased emphasis on 'conservation BAP-style' is misguided in its emphasis, addressing some of the symptoms rather than the causes of biodiversity loss. PPS9 does state that habitat networks should be protected from development and emphasises a more strategic approach to nature conservation. Moreover, the draft *Good Practice Guide* discusses mechanisms to achieve this strategic goal, e.g. by means of strategic development control policies in RSSs. It is still debatable, however, as to whether PPS9 should have placed greater emphasis on protecting ecological process and the wider countryside and on a dynamic approach to nature conservation at the landscape scale, more in tune with the constant need of ecosystems to respond to inevitable environmental and social change (Wildlife and Countryside Link 2004).

Another concern relates to the quality of BAPs and what they contain and emphasise. For example, local BAPs reflect local values and aspirations in terms of biodiversity and there is tremendous variation in content and degree of thoroughness in such documents nationwide. The selection of local BAP priority species and habitats can sometimes appear rather random, and their inclusion as key conservation goals in RSSs and LDFs may be at the expense of wildlife, ecosystems or even ecological processes arguably more worthy of our positive intervention. Admittedly, sanction over the standards of local BAPs falls somewhat beyond the remit of PPS9. Again, proficient ecological expertise in LPAs is vital to develop meaningful targets in particular situations.

The PPS9 draft *Good Practice Guide*

Whilst some might contend that the brevity of PPS9 is a good application of the principle of 'less is more' providing clarity and less scope for multiple interpretations, which is certainly true in comparison with PPG9 (see Tyldesley, 2005), others have voiced criticism that this may result in ambiguity (Town and Country Planning Authority 2004b, Wildlife and Countryside Link 2004). It would doubtless be counter-argued by ODPM and DEFRA that PPS9 should only be used in conjunction with the two much more detailed accompanying documents, the Circular and the draft *Good Practice Guide*. The draft *Good Practice Guide* provides sound advice, through case studies and examples, on ways that planning authorities can help to deliver the national policy of biodiversity-affirming sustainable development. Whilst this document shows ways in which Government considers the principles of PPS9 can be met, it remains unclear whether PPS9 will be interpreted in the spirit of the draft *Good Practice Guide* or whether the shortcomings highlighted in this article will significantly hinder progress towards truly sustainable, biodiversity-affirming, development.

Conclusion

PPS9 provides much more than simple planning guidance; it also forms the basis of biodiversity policy in RSSs and LDFs. Where development proposals are not in accordance with RSSs and LDFs, unless there are material considerations to indicate otherwise, planning permission should be refused. As a consequence of this statutory basis, planning policy has the potential to play a significant part in integrating biodiversity into development and thus contributing to an ecologically sustainable future.

PPS9 now commits planning authorities to the Royal Town Planning Institute's (1999) five-point approach to decision-making which is: (i) basing decisions on up-to-date ecological information; (ii) avoidance of impacts where possible; (iii) mitigation of significant impacts; (iv) compensation for losses of important biodiversity; and (v) new benefits or enhancement. This applies not only to species and habitats protected under the Wildlife and Countryside Act and the Habitats Regulations but also to national, regional and local BAP priority species and habitats, and also non-designated sites such as ancient woodland, aged or veteran trees, and habitat networks.

The 'no net loss' approach to nature conservation, despite some recent minor nationwide gains in biodiversity through habitat creation (DETR 2000), might be described as having been an attempt in 'fire-fighting' habitat and species decline. The change to the 'net gain' approach through an emphasis on enhancement is the key feature of PPS9. Without this new philosophy, the UK landscape will never be richer in wildlife than at present, and in all likelihood habitats will become increasingly impoverished (Oxford 2000). This said, the scale and quality of ecological enhancement required in relation to individual developments is not clearly defined in PPS9 and will need to be agreed on a case-by-case basis. For enhancement to truly mean 'net gain' planning authorities need to be insisting that developers guarantee more ecological resources following development than beforehand. Even if this requirement is clearly understood by all parties, it will prove very difficult indeed for planning authorities to implement, along with other advances in PPS9, within existing budgets. Nevertheless, this will prove to be the key test of truly sustainable development as described at the start of this article.

In the draft *Good Practice Guide* accompanying PPS9 the Government sets out examples of the importance that it considers biodiversity has in sustainable development. It appears to interpret the policies of PPS9 as most members of IEEM would also have chosen, namely to maximise the provision of appropriate biodiversity and the associated multiple benefits through the planning process. If developers, planners and consultants are able to collaborate and adopt this guidance, rather than seeking escape clauses in legislation and policy, then perhaps a new ambitious and innovative design philosophy can be embraced. Perhaps we can all grasp the opportunity not only to meet our economic and social requirements and aspirations but also to address the requirements of all life forms and processes on which man ultimately depends, and which add vital context to our lives.

Acknowledgements

We are grateful to Andrew Baker MIEEM, Adam Boyden AIEEM, John Box FIEEM, Richard Graves MIEEM, Jonathan Price (English Nature) and David Tyldesley MIEEM for their constructive comments on this article.

References

- Baker, A. 2005. Brief Law Update. *Ecology and Environmental Management In Practice*, **47**, 23-23.
- Christie, I., Southgate, M. & Warburton, D. 2002. *Living Spaces: A Vision for the Future of Planning*. RSPB, Sandy.
- Countryside Agency 2000. *Planning Tomorrow's Countryside*. Countryside Agency, Cheltenham.
- DEFRA 2002. *Working with a Grain of Nature: A Biodiversity Strategy for England*. DEFRA, London.
- DETR 2000. *Countryside Survey 2000 Accounting for Nature: Assessing Habitats in the UK Countryside*. HMSO, Norwich.
- ODPM 2005. *Planning Policy Statement 9: Biodiversity and Geological Conservation*. HMSO, Norwich.
- HM Government 1994. *Biodiversity: The UK Action Plan*. HMSO, London.
- IEEM 2006. *Draft Guidelines for Ecological Impact Assessment*. IEEM, Winchester.
- Marram, P. 1992. *Nature Conservation: A Review of the Conservation of Wildlife in Britain 1950-2001*. Harper Collins, London.
- Nicholson-Lord, D. 2003. *Green Cities – And Why We Need Them*. New Economics Foundation, London.
- ODPM 2003. *Sustainable Communities: Building for the Future*. ODPM, London.
- ODPM 2005. *Core output Indicators for Regional planning*. HMSO, Norwich.
- ODPM & DEFRA 2005. *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning*

- System (ODPM 06/2005 & DEFRA 01/2005)*. ODPM, London.
- ODPM 2005. *Planning Policy Statement 1: Delivering Sustainable Development*. HMSO, Norwich.
- Oxford, M. 2000. *Developing Naturally: A Handbook for Incorporating The Natural Environment into Planning and Development*. The Association of Local Government Ecologists.
- Oxford, M. & McArthur, R. 2000. *A Biodiversity Guide for the Planning and Development Sectors in the South West*. RSPB, Exeter.
- Royal Town Planning Institute 1999. *Planning for Biodiversity: A Draft Good Practice Guide*. RTPI, London.
- RSPB 1996. *Sustainable Development: The Importance of Biodiversity*. RSPB, Sandy.
- RSPB 2005. *Wellbeing Through Wildlife*. RSPB, Sandy.
- Town and Country Planning Association 2004a. *Biodiversity by Design: A Guide for Sustainable Communities*. Town and Country Planning Association, London.
- Town and Country Planning Association 2004b. *Town and Country Planning Association Response to ODPM Consultation PPS9: Biodiversity and Geological Conservation*. http://www.tcpa.org.uk/consultation_files/responses2004/PPS9-Final091204.htm
- Tyldesley, D. 2005. The New Planning Guidance – Why it Matters. *Ecos*, **26**, 107-110.
- Wildlife and Countryside Link 2004. *Consultation on Planning Policy Statement 9: Biodiversity and Geological Conservation: Response from Wildlife and Countryside Link*. http://www.wcl.org.uk/downloads/2004/WCL_PPS9_response_Dec04.pdf.
- William McDonough & Partners 1992. *The Hannover Principles: Design for Sustainability*. William McDonough & Partners, Charlottesville.

Dr Lincoln Garland is a Principal Ecologist at Faber Maunsell. Dr Mike Wells is Principal Ecologist and an Associate Director at Nicholas Pearson Associates.

EXTRA IEEM WORKSHOPS...

Dear reader,
Please note that the following courses have been added to the 2006 Professional Development Programme. For further details about these courses please go to the IEEM website (<http://www.ieem.net>) and click on workshops.

26-27 Apr 2006 - Great Crested Newts & Development
(Rixton Claypits LNR, Cheshire)

08 Jun 2006 - Survey of Protected Mammals in EIA
(Dunblane Area)

09 Jun 2006 - Protected Mammal Impact Assessment and Mitigation (Dunblane Area)

06 Jul 2006 - Great Crested Newts: Mitigation, Habitat Creation and Translocation (Gartcosh, North Lanarkshire)

13 Sep 2006 - Introduction to GIS for Ecologists
(Moulton, Northamptonshire)

14 Sep 2006 - Introduction to Phase 1 Habitat Survey
(Newark, Nottinghamshire)

Thanks, Nick Jackson

Amphibian and Reptile Groups UK Herpetofauna Workers' Meeting

*Jon Cranfield AIEEM and
John Baker MIEEM*

Coventry University Technocentre, 3-5 February 2006

The Herpetofauna Workers' Meeting is an annual conference for volunteers and professionals concerned with amphibian and reptile conservation. This year the meeting was organised by the Amphibian and Reptile Groups of the United Kingdom (ARG UK). ARG UK is the new name for the Herpetofauna Groups of Britain & Ireland. The change of name is part of an effort to revitalise the network of volunteer amphibian and reptile groups around the country, and the conference was a launch platform for the new organisational name. The considerable task of organising the conference was undertaken by ARG UK officials.

The conference was officially opened by Mark O'Shea, the celebrity television herpetologist, who welcomed everyone to two days of presentations and workshops and later gave a guest presentation during the conference social evening.



Mark O'Shea, celebrity herpetologist

A major theme of the conference was the Amphibian and Reptile Groups themselves. Jan Clemons (ARG UK Chair) outlined the role of these groups, Jon Cranfield gave advice on running a successful group based on experiences of two ARG groups in Essex and Hampshire, and David Orchard (ARG UK Vice-Chair) reviewed some highlights of amphibian and reptile group work over the last year.

As usual at such conferences, there was a great deal of focus on the great crested newt – being a strictly protected, but widely-encountered species. Nevertheless, there was a broad range of research presentations.

Lee Brady (Kent Reptile and Amphibian Group) described very effective use of a habitat suitability index in conjunction with great crested newt surveys to determine habitat quality and provide estimates of pond occupancy. David Sewell (Durrell Institute of Conservation Ecology) gave the results of research into the effectiveness of survey techniques for the great crested newt and re-iterated the message that counts of newts do not equate to

reliable indicators of population size. Factors such as the brightness of torches used during survey can affect the number of newts seen. David recommended torches of half a million candle power.

Projects examining mitigation work were described by Brett Lewis (Durrell Institute of Conservation Ecology) for great crested newts and Warren Cresswell (Cresswell Associates) for reptiles. A common factor to emerge from both studies was the need for more thorough and standardised survey and monitoring of populations to allow accurate assessment of the success of mitigation work.

John Baker (Herpetological Conservation Trust) gave an overview of the National Amphibian and Reptile Recording Scheme currently being developed and gave an update on one of its projects 'Make the Adder Count', an ongoing survey to determine trends in adder populations, while raising awareness of the snake's conservation needs. Other work at the Herpetological Conservation Trust was reported by Chris Gleed-Owen, who described the digitisation of rare reptile records to allow the development of population inventories and conservation strategy, and Tony Gent, who gave an overview of the work and organisational structure of the HCT.

Tim Halliday (Declining Amphibian Populations Task Force) gave a global perspective to herpetological survey and conservation work in the UK, by highlighting the global biodiversity loss among amphibians. Jonathan Houghton (University of Wales, Swansea) gave an entertaining talk on the feeding ecology of leatherback turtles in UK coastal waters and Jim Foster (English Nature) gave an update on the pool frog reintroduction programme – one of the most exciting current herpetofaunal conservation projects. After recognition of the native status of the pool frog, almost coincident with its extinction in England, frogs from Sweden were introduced to a specially prepared site in 2005.

Conference workshops allowed involvement with the development of the National Amphibian and Reptile Recording Scheme and the ARG UK website. They also covered reptile habitat management and survey design, working with local biodiversity plans and planning authorities. It is anticipated that an output of these workshops will be the production of published advice regarding the planning system and reptile habitat management.

The conference has generated a great deal of positive feedback and has created a buzz among the voluntary amphibian and reptile network. A great deal of credit for organising the conference is due to the hard work of ARG UK officials Jan Clemons, David Orchard and Chris Gleed Owen.

The conference was generously supported by English Nature, the Herpetological Conservation Trust, Environment Agency, North West Conservation Projects Ltd, Froglife and the Essex Amphibian and Reptile Group. ARG UK is currently seeking funds to support the network and to employ a support officer. Any donations or offers of support should be made to the ARG UK Chair: Jan Clemons, ARG UK, c/o HCT 655A Christchurch Road, Boscombe, Bournemouth, Dorset BH1 4AP.

Anyone wishing to contact the Amphibian and Reptile Groups of the United Kingdom should visit the website www.arg-uk.org.uk



Zoological Society of London Scientific Meeting

Jason Reeves AIEEM

On 14 February, whilst others were enjoying a romantic dinner, the Zoological Society of London held a scientific meeting on the 'Conservation of Large Carnivores outside Protected Areas.' The evening consisted of five lectures on large predator conservation in various parts of the world.

The evening was opened by Sir Patrick Bateson, President of ZSL.

Sarah Durant (ZSL/WCS) spoke on the difficulties in protecting cheetahs and wild dogs in Tanzania. Not only are these species competing with lions and hyenas but they also require immense areas for viable populations and are found at much lower densities than other large predators. Conservation of these animals therefore requires a programme not totally dependent on protected areas. This requires careful management of human-carnivore conflict outside protected areas.

Luigi Boitani (University of Rome) talked about the conservation of wolves, bears and lynx in Europe. There are currently several populations of large carnivores outside of protected areas in Europe that co-exist with humans. In the short term these populations must be protected from extinction, but in the long term a comprehensive strategy incorporating protected areas as a fundamental component is needed with clear management goals to prevent and mitigate conflict (e.g. sheepdogs and conservation compensation).

Sarah Christie (Conservation Programmes, ZSL) discussed tiger conservation and agribusiness in Sumatra. Tigers in the study area survive in a habitat mix of scrub, oil palm and logging concession. Habitat connectivity here is being lost all the time, but by working with big business wildlife corridors can be established, priority sites can be avoided and the impact of big business generally mitigated.

Esteban Payan (Institute of Zoology, ZSL) considered jaguar conservation in Colombia. The main threats to jaguars are conflicts with livestock, habitat loss and degradation, and competition for wild prey with ranchers. He looked at Latin American jaguar-livestock conflict scenarios and how areas and opportunities can be identified for conservation.

M. Monirul H. Khan (Jahangirnagar University, Bangladesh) examined the problems of people and tigers living together in the Sundarbans of Bangladesh. Tigers kill many people and humans here kill many tigers every year. A research and conservation project funded by the Save the Tiger Fund is, along with studying tiger densities, educating local people on practical and realistic ways to reduce tiger attacks (e.g. big sticks and chained dogs).

All of this boils down to the need for efficiently managed ecological networks (see next page).

For more information on other ZSL events please visit www.zsl.org.

DESIGN COMPETITION

In the near future IEEM is planning to purchase mouse mats that can be used to further raise the profile of the Institute.

Can you design a mouse mat representative of the Institute?

The winner will have the pleasure of knowing that their design will be sitting on ecologists' desks around the world.

Please send designs to Jason Reeves
at
jasonreeves@ieem.net
by
Friday 12 May 2006.



“... variety, challenge,
great people ...”

...the first asset we'll develop is you

Freshwater and Terrestrial Ecologists

Associate Director - Leamington Spa, Senior Consultants - Bristol, Edinburgh, Glasgow, Leamington Spa, Leeds, Newcastle upon Tyne, Shrewsbury, Consultant - Newcastle upon Tyne



Entec is a major environmental and engineering consultancy with over 700 staff and associates across a national network of offices. We have a busy and successful, 25+ strong team of terrestrial, freshwater and marine ecologists/biologists applying our expertise to a wide variety of challenges through environmental impact assessment, ecological and biodiversity research studies, habitat restoration projects and protected species mitigation. We need to meet business growth by further strengthening this team.

You'll need a relevant degree and to be able to demonstrate good communication and reporting skills, well developed data analysis, interpretation and field skills, a broad knowledge of and passion for ecology and nature conservation, and a desire to apply this knowledge to practical matters. More senior posts ideally require a few years' experience in a commercial environment and experience in

ecological impact assessment (preferably as part of EIAs and/or Appropriate Assessments). The Associate Director position requires a strong track record in business development and business management with private sector clients.

To apply, or for more information about these and other roles, please visit www.entecuk.com/jobs (Planning & Environmental Appraisal) or contact the Recruitment Team directly at recruit@entecuk.co.uk or (0191) 272 6339.

No Agency CVs please.

Entec
Creating the environment for business

Ecological Networks

Linda Yost CEnv MIEEM

The location does not matter, the conference title does not matter, discuss biodiversity and the message is the same – biodiversity is still in decline. An example of this is the Message from Malahide; a conference entitled 'Biodiversity and the EU – Sustaining Life, Sustaining Livelihoods' May 2004, set out priority objectives and detailed targets designed to meet the EU commitment to 'halt the decline of biodiversity by 2010'¹, and to 'deliver the overall EU 2010 target and to optimise the EU's contribution to the overall global 2010 target'².

In the 50's the response to the effects of human activity causing environmental destruction was the designation of areas that were 'protected'. With continuing human activity these areas have become increasingly isolated, rich fragments in a degraded landscape. Experience and the passage of time have shown us that these designated areas need to be reconnected. As noted by the IUCN sustainable development is about 'harnessing ecosystem services, and managing and maintaining ecosystems to produce those services for the biosphere...a partnership between development and conservation and not a protection of conservation against development'³.

The need for connectivity is recognised in the Habitats Directive, Article 10 'Member States shall endeavour,



where they consider it necessary, in their land-use planning and development policies and, in particular, with a view to improving the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora. Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species⁴.

Connectivity is also recognised in the Pan-European Biological and Landscape Diversity Strategy, it considers the '...Pan-European Ecological Network...the operational framework...[for] strategic and priority actions...a physical network through which ecosystems, habitats, species, landscapes...of European importance are conserved...'

This recognition is reiterated in several of Malahide's objectives:

'To ensure conservation of Europe's most important wildlife habitats and species within a thriving wider environment' in particular: 'protected areas integrated into broader landscapes and seascapes by applying the ecosystem approach, and where appropriate, developing tools for ecological connectivity, such as ecological corridors.'

'To prevent or minimise the negative impacts on biodiversity and optimise opportunities to benefit biodiversity, in relation to climate change adaptation and mitigation' in particular: 'the ecological connectivity of Natura 2000 network supported in order to achieve or maintain favourable conservation status of species and habitats in the face of climate change, including the promotion of cross-border ecological corridors between the EU and neighbouring states.'

And

'To ensure that Cohesion policy and spatial planning support conservation and sustainable use of biodiversity' in particular: 'Substantial proportion (10%) of structural funds guaranteed under Financial Perspectives 2007-2013 for positive measures for the conservation and sustainable use of biodiversity, in particular to enhance ecological connectivity.'

The European Nature Conference in September 2005, at Apeldoorn promoted connectivity at its conference and in the 'conference appeal' noted 'connect nature with nature: create a resilient European ecological network'.

European countries are working to establish ecological networks. Holland, through its 'Ecologische Hoofdstructuur' (EHS) or 'National Ecological Network,' is continuing to develop ecological networks, including cross border networks.

The Dutch recognised both the social and political urgency of ending environmental degradation and loss and published its 'Nature Policy Plan' in 1990, which was revised in 2000 to 'Nature for People, People for Nature'. Its main theme, the EHS concept is their tool to achieve the policy's aim of making 'an essential contribution to a liveable and sustainable society through the conservation, restoration, development and sustainable use of nature and landscape'. The EHS is seen as a solution to ecosystem fragmentation and loss

of environmental quality; 'a spatially coherent network of existing and new natural areas' of countryside and water bodies (including parts of the North Sea). By 2018, the aim is to have increased the area of countryside that is preserved, new or restored to 730,000 ha, an increase of 280,000 ha. Robust inter-connections will link natural areas that are being increased in size and improved in quality; this combination of actions will increase the carrying capacity and coherence of the natural areas.

The EHS is composed of:

- core areas of national or international value;
- ecological development areas (can include former farmland);
- management areas (land in private hands managed for nature conservation);
- inter-connecting areas (linear, continuous, stepping stones); and
- buffer zones.

This network is expected to provide the necessary means by which individual (many small fragments) habitats can increase in nature conservation value by becoming functionally larger. This will include the breaching of roads,

railway lines and canals that form barriers for both flora and fauna. This increasing connectivity and improvement in the nature conservation value of natural areas should enable species to migrate and promote the genetic exchange required to maintain healthy populations. It may also allow species redistribution in the face of climate change. But, not all aspects of connectivity are positive; there are species that only survive because of their isolation and increasing connectivity also allows non-indigenous species to spread.

'Nature for People, People for Nature' though is more than just about the 'reconnection of nature' there are other issues that it is to address:

- ecosystem functions (e.g. production of clean water, CO₂ absorption, sustainable use of natural resources);
- social values (e.g. rural, cultural, historical, archaeological and geological values,
- economics (sustainable recreation, agriculture, fisheries and transport);
- 'green' locations for living and working; and
- mental and physical well-being.

An example of the type of restoration work undertaken is that in the Renkum Brook Valley where the removal of an industrial area in the valley has allowed the Veluwe–Rhine corridor to return to an uninterrupted state. Another example is Oostvaardersplassen; a coastal area reclaimed from sea and zoned for industrial development in the late '60s, but found to be of significant nature conservation value and subsequently designated as a Ramsar site and Special Protection Area for Birds. Oostvaardersplassen is part of the EHS but is also being used as a study area to test a theory⁴ that pre-historic European landscape was open woodland pasture not a closed forest canopy, as a result of grazing by ruminants.

A recent publication 'Making Space for Wildlife and People'⁵ proposes an Ecological Network in Norfolk. Using the same framework as the EHS (core areas, enhancement areas, buffers, corridors and stepping stones) it is promoting a defragmentation of Norfolk, which goes beyond pure nature conservation by having multifunctional aims: (spatial planning, sustainable use, targeting of Biodiversity Action Plans and socio-economic benefits). Norfolk has suffered '*...catastrophic loss and decline of once common habitats and species...*' with intensive agriculture and the change in long established land management practices, such as mixed farming and woodland coppicing, being the main causes. This has led to habitat fragmentation; small wildlife sites of a few hectares surrounded by land used for agricultural or other purposes. The main areas to have avoided this are along the coastline, the Broads and the Brecks; not only are these areas of nature conservation value, they define the character of Norfolk and are of economic value, in particular for tourism. Even so, these areas are affected by intensive agriculture and other activities that prevent them from achieving their full potential.

*Rebuilding Biodiversity: New Landscapes for Wildlife and People*⁶ has been developed by the South West Wildlife Trust. It focuses on '*functional landscapes for wildlife based on sound science*' and reiterates that '*the continuing declines of both common and restricted species associated with wildlife sites and the open countryside, and the likely effects of climate change, signal that the current strategy is not adequate*'. Rebuilding Biodiversity, in a South West England context, offers a methodology to define what area is required by wildlife to survive long-term; isolated, fragmented habitats and species being vulnerable and unstable. Going beyond protected areas it promotes habitat restoration and creation at a landscape scale, defining the size, number and location of areas of land containing multiple, viable (or feasibly restorable) examples of all native species, communities and ecological systems across important environmental gradients.

Developing Ecological Networks not only fulfils requirements under the EC Habitats and Birds Directives, but also international obligations under the Convention on Biological Diversity and the Berne, Bonn and Ramsar Conventions and OSPAR. For Holland this also means it is crucial to connect natural areas across its borders with Belgium and Germany including its marine boundaries.

Ecological Networks are being increasingly promoted as necessary for nature conservation and human welfare; as it states in Scotland's Biodiversity strategy: '*...need to recognise and take account of the value of ecosystems and the services they provide.*' '*...need to "reconnect" fragmented habitats and populations, and ensure that as climate change takes effect, wildlife can move and adapt as far as possible.*'

References:

¹ Presidency Conclusions, Goteborg Council, 15 and 16 June 2001. SN/200/1/01 REV1, page 8. http://ue.eu.int/ueDocs/cms_Data/docs/pressData/en/ec/00200-r1.en1.pdf

² *Biodiversity and the EU: Sustaining Life, Sustaining Livelihoods Conference Report* http://europa.eu.int/comm/environment/nature/biodiversity/develop_biodiversity_policy/malahide_conference/pdf/conference_report.pdf

³ Andrew F Bennett. (2003). *Linkages in the Landscape – The role of Corridors and Connectivity in Wildlife Conservation*. IUCN.

⁴ Dr Frans Vera *Grazing Ecology & Forest History*. Cambridge University 2000.

⁵ Norfolk Wildlife Trust *Making Space for Wildlife and People*. October 2005. admin@norfolkwildlifetrust.co.uk

⁶ *Rebuilding Biodiversity An Introductory Primer*. A regional approach to landscape-scale planning for habitat restoration. Developed by the South West Wildlife Trusts for use by the South West Regional Biodiversity Partnership November 2004.

⁷ *Scotland's Biodiversity: It's in Your Hands - A strategy for the conservation and enhancement of biodiversity in Scotland* p 38. <http://www.scotland.gov.uk/Resource/Doc/25954/0014583.pdf>

(Slides courtesy of Hans Kampf)



ENVIRONMENTAL CONSULTANT

Lockhart Garratt is the leading independent forestry and woodland management consultancy in central England. Over recent years, we have also become environmental advisors to some of the region's biggest developers, local authorities and public regeneration companies. We now lead the way in applying Green Infrastructure policy to development.

Employing a mixed team of professionals (five of whom have gained their chartered status with us) we require assistance with environmental master-planning, EIA and mitigation, habitat design and creation, field ecology and land management.

The opportunity is to work in a small, highly motivated team, influencing how the company and your own career evolve. You will require a good, relevant degree/masters, 3-5 years' credible experience and preferably a recognised professional qualification.

Please apply by end April 2006, sending your CV and covering letter to :-
Graham Garratt, Lockhart Garratt Ltd, 8 Melbourne House,
Corbygate Business Park, Corby, Northants, NN17 5JG.

www.lockhart-garratt.co.uk

A New Road to Travel (or Landscape, Bloody Landscape)

Michael Starrett

PART ONE: Thinking about it

This is not about motorways. 2, 4, 6, 8 or any other variety.

This is not a rebel song – it is about landscape, bloody landscape.

This is about something so blindingly obvious that I really have to ask the question why it hasn't happened already. **Ireland needs a Landscape (Ireland) Act.** Not an Act to stifle development, not an Act to fossilise our environment but an Act which focuses directly on what is Ireland's most important asset i.e. where all of us live, work and play and which contains all our natural and cultural resources i.e. OUR LANDSCAPE. Why we don't have such legislation already is hard to comprehend. Providing it would be good for everyone who lives on or visits this island.

The signposts have been pointing us in this legislative direction for a long time. As far as the future well being of our landscape is concerned we are now most definitely at a major cross-roads and have to make a major choice. Experience dictates that the choice should be the route marked LEGISLATION and that if we take it everyone will benefit.

Why? Because it would give us a focus and structure in which we can work to resolve all those current issues which today seem to make such graphic headlines. These include loss of farm incomes, decline in rural tourism, decline in quality of life and many others too numerous to mention.

Why? Because it will bring us in to line with every other European Country and it will allow us to live up to the commitments we undertook when Ireland ratified the European Landscape Convention.

PART TWO: Realising it

Recent articles in the media have highlighted the concerns about our landscape. You really must have had your head in a fertiliser bag if you are not aware of the coverage on our agricultural landscape. The decline in farmers, the decline in farm incomes, the age profile, the nitrate directive, the Common Agricultural Policy, the World Trade Talks have all loomed and doomed large. Similarly the urbanisation of our tourism industry and the impact on rural economies, the loss of the traditional bed and breakfast accommodation, difficulties of access to the hills, and a lack of provision for countryside recreation have all been cited as contributory factors in our difficulties of keeping rural economies diverse, healthy and dynamic. In short a healthy and dynamic rural economy equates to a diverse, healthy and dynamic landscape.

That bag over your head would need to be particularly thick for you to have unaware of the impact of new infra-structure on our landscape (Tara), to say nothing of the debate on rural housing (everywhere), village design and heaven forbid sustainable development.

Well let's face it; landscape is very relevant to our everyday lives. We all live, work and play in a landscape. Surely something so significant deserves to be looked after in the best way possible and be the subject of a particular focus. Our democracies work through legislation, and legislation is what our leaders use to focus, to provide finance and structures to make the democracy work. It all sounds so simple.

PART THREE: Doing it

If I look at the last 10 years the case for new legislation for our landscapes has been carefully constructed to a point where the blindingly obvious decision now needs to be taken. This is not to criticise any existing systems or legislative provisions, such as our Planning Acts. Heaven forbid. They are for different purposes. It is just to say that if we are to resolve current issues new approaches and new legislation are needed.

The work of the Heritage Council whether on;

- waterway corridor studies,
- cultural and natural landscapes,
- state sector spend on heritage,
- archaeological features at risk,
- buildings at risk,
- attitudes and awareness raising,
- heritage appraisal,
- the heritage officer programme,
- its grants programmes,
- its policies on forestry and agriculture, or
- its biological records

has all been predicated on working within existing legislative provision and in particular to help Council carry out its own responsibility to *inter alia* "promote the co-ordination of all activities relating to its functions" * It is time for a change.

Imagine a world where an area where you lived could be designated under legislation.

(Please don't just say "not another designation") this is different.

With the designation would come a package of measures and a commitment to develop and work to an agreed set of objectives. These would focus on retaining and enhancing the quality of the landscape in which you lived. The character of the area (what makes it different and diverse) would be agreed and a structure would be put in place to work specifically towards, and allow, development of that character. This would be through a package of rural development (including tourism) measures related to keeping that landscape vibrant, diverse, dynamic and healthy by associating it with a vibrant, diverse, dynamic and healthy rural economy. A group of staff dedicated to the task (and not responsible for a plethora of other activities) would be working to make it happen. They would also be accountable if it didn't.

Imagining that world is not so far fetched. The Heritage Council has already offered assistance to one local authority to develop the model. All they have to do is say yes.

I have just completed three years as President of a European Federation of Nature and National Parks of Europe which has over 300 members in 40 countries all committed to the conservation, management and development of their landscapes. They make it work. Why can't we?

Michael Starrett
An Chomhairle Oidreachta
December 2005

Michael Starrett is Chief Executive of the Heritage Council. He is a member of the Landscape Institute, an honorary member of the Irish Landscape Institute and a member of the Institute of Leisure and Amenity Management. From 2002-2005 he was President of the Federation of Nature and National Parks of Europe.

*[The Heritage Act 1995 section 6]

South West (Shadow) Section Launched!

The South West Shadow Section was launched officially on 17 January 2006 at the Devon County Council offices in Exeter. The salubrious Council Chambers provided a fitting venue for this prestigious event, which took the form of an evening meeting that was chaired by IEEM Vice-President Dr Eirene Williams. Over 80 IEEM members attended and heard three presentations from Chris Davis (English Nature), John Goss-Custard (formerly CEH and now an independent researcher/consultant) and George Bemment (independent consultant).

Chris Davis' presentation reminded us of the importance of the marine environment and how habitat and species loss within our seas is often overlooked by professional ecologists, as well as our wider-society. Chris highlighted the importance of Marine Nature Reserves and illustrated his argument using Lundy Island Marine Nature Reserve, the only reserve of this type in the United Kingdom. It was a really stimulating presentation and left most of the audience thinking that we definitely need to do more on this front!



Eirene Williams and Matt Jones at the launch

Our understanding of the behaviours of our shorebirds has increased dramatically in the last 30 years and a substantial reason for this is the work undertaken by John Goss-Custard. John's fascinating presentation introduced us to the 'Individual Based Model', which urged us to look at 'species fitness' when looking at potential effects on shorebird populations. Illustrated with numerous case studies to validate his model, John's work is a must for anyone studying the effects of different impacts on wader and waterfowl populations.

The South West is one of the strongholds for bats within the UK and there are few better placed people to tell us all about them than George Bemment. Her interesting and enthusiastic presentation looked at a range of species distributions across the Region, most notably the lesser horseshoe bat. She also talked through a number of her own case studies, which highlighted a variety of bat mitigation techniques.

Between presentations, there was plenty of time for networking and meeting fellow IEEM members. The food and wine provided matched the high-quality presentations, and became one of the most important talking points of the evening! Many thanks to Peter Chamberlain (Devon County Council Ecologist) who helped out with the organisation and the venue.

There are a number of evening meetings and field visits in the South West throughout 2006. Full programme details can be seen on our website (under 'Geographic Sections') or can be obtained from the SW Section Coordinator, Matt Jones, (mattj@eadconsult.co.uk).

Response to Irish (Shadow) Section Members' Survey

Mieke Muyllaert CEnv MIEEM

In June 2005, the steering group of the Irish Section of IEEM circulated a questionnaire to members based in Ireland, to help profile the membership and target future events and CPD. Members were asked about their geographic location in Ireland, the sector that they work in and their main areas of interest. The rest of the questionnaire queried the type of future events/CPD that would be of most interest, including duration and cost.

There were 27 respondents, which at the time comprised approximately 50% of the membership in Ireland. This is around the average response rate for a postal/email survey. Most respondents work in consultancy, largely in the areas of EIA, habitat management, botany, species/habitat surveys, habitat restoration, monitoring and general ecology.

Half are interested in all types of CPD events that might be held, including conferences and seminars. Of the remaining 50%, all selected field-based CPD as one of their preferences, with two-thirds also selecting workshops. Preferred topics are: general ecology, plants, habitat management, habitat survey, monitoring, birds, EIA, and mammals.

More than half would prefer events to take place on a weekday. Slightly over half would be more likely to attend 1-day events, while just under half didn't mind if events were held over one or two days, if the topic was of interest to them. Two respondents expressed an interest in half-day events. The trend towards shorter events is a reflection of the demands on members' time. Most would be prepared to attend a topic not immediately related to their main field of interest. All thought a field element was an important part of an event, where relevant. Almost all were prepared to pay the same as current IEEM CPD event rates (approx. 70).

The results indicate that there is a high demand for CPD among members in Ireland, and that most are looking for focused, practical events. The last question asked how a geographical section can be relevant to members in Ireland. The majority think that it can help with networking and the improvement and standardisation of professional ecological practice, and so help raise the professional standing of ecologists. It could also facilitate CPD that is more relevant to Irish legislation and practice.

The Section steering group is currently researching CPD opportunities for the coming year, and would be delighted to hear from anyone who would like to offer their services for next year. As the lead-in time for workshop organisation can be long, for example in organising venue and leaders/speakers, now is the time for suggestions, so that we can see events in Ireland listed on the 2007 CPD programme, which goes to press in September of each year. IEEM have produced guidance for organising informal training (Professional Issues Series no. 4), which is available in PDF format. Anyone interested can contact IEEM at nickjackson@ieem.net, or the Irish shadow section secretary at mieke@eircom.net for more information.



Welsh Section
Would you like a Section for Wales?
To help set up a Welsh Section contact lindayost@ieem.net.

Habitat Classification and Mapping

IEEM Irish (Shadow) Section Conference

The first Conference of the recently formed Irish (Shadow) Section took place at the in National Botanic Gardens in Dublin on 17 October 2005. There was a very good turn out with more than 100 people registered for the conference. Most of the delegates were practising ecologists, but there was a good representation from other sectors including local authorities, industry and NGO's.

Mrs Linda Yost, the **IEEM Deputy Executive Director**, opened the conference with brief introductory talk on the Institute and chaired the morning session, which comprised three talks focused on Habitat Classification.

Dr Julie Fossitt of the **National Parks and Wildlife Service** spoke about **Building on the classification of habitats in Ireland**. A Guide to Habitats in Ireland was published in 2000 as the first hierarchical habitat classification that covered natural, semi-natural and artificial habitats of terrestrial, freshwater and marine environments in Ireland. A key consideration when it was being drafted was that it should be seen as a working document that would evolve and be revised over time. In the five years since its publication the classification has been widely adopted and tested. It was considered whether it was timely now to look at possible revisions and amendments of the classification, including the need for corrections, clearer habitat definitions, new habitat categories, and the inclusion of a fourth level in the hierarchy.

Mr Shaun Wolfe-Murphy of **WM Associates** explored the **Correlation between JNCC and Heritage Council classification schemes**. The Environment and Heritage Service (EHS) in Northern Ireland and National Parks and Wildlife Service in the Republic of Ireland use different habitat classifications; that used by EHS follows the Nature Conservancy Council (GB) and that used by National Parks and Wildlife Service was independently compiled. These classifications were compared for coverage, ease of use and compatibility.

Dr Colmán Ó Críodáin of the **National Parks and Wildlife Service** looked at the **Correspondence between the Heritage Council Classification and Annex I of the EU Habitats Directive**. Member States have been required to select candidate Special Areas of Conservation for the habitat types listed in Annex I of the Habitats Directive and so defined in the Interpretation Manual published by the European Commission. 60 Annex I habitat types occur in Ireland.

The publication *A Guide to Habitats in Ireland* by J. Fossitt (2000) indicates where there is correspondence or partial correspondence between its categories and those of Annex I. This though, is only intended as an alert as it is not always sufficient to *confirm* the presence of an Annex I habitat. For some habitats the correspondence is self-evident but in other cases greater judgement is required and the official Identification Manual is the best guide.

The morning talks were followed by a general discussion with questions that focused on:

- designated areas and whether Ireland has designated sufficient coverage of Annex I habitats and what the chances were of new areas being protected, and
- the consideration that the classification of freshwaters was weak and that there is currently no good classification scheme for freshwater habitats in Ireland, outside of using invertebrate indicators.

After lunch and an optional walk around the Botanic Gardens on a bright, sunny, autumn day, the afternoon session was chaired by Dr. Liam Lysaght of the Heritage Council. There were three more presentations, which addressed habitat mapping.

Richard Nairn from **Natura Environmental Consultants** started the afternoon with an **Introduction to the Heritage Council Habitat Survey Guidelines**. NATURA Environmental Consultants prepared these guidelines for the Heritage Council. They form a companion to *A Guide to Habitats in Ireland*. The new guidelines focus on the practical aspects of field mapping and translating the results into a finished habitat map. They review the various sources of information including maps, aerial photographs and other datasets on habitats in Ireland. Practical issues such as equipment, facilities, survey coordination, field survey methods and data management are covered in the second section of the Survey Guidelines.

Deborah Tiernan from **Fingal County Council, Parks Division** introduced the **Practicalities of habitat mapping in recording baseline data for Local Action Plans**. In recognition of the need for up-to-date ecological information for Local and National Biodiversity Plans, Fingal County Council began an inventory of its Biodiversity resource in 2003. Habitat mapping forms the basis of this inventory, identifying the variety and extent of habitats present and establishing the possible need for more detailed ecological survey work at any given site. The habitat data collected during a mapping exercise is processed in an interactive GIS database and complemented with additional detailed information on flora and fauna. Local Biodiversity Action Plan can then be drawn up based on this information.

Tim Ryle working with **National Parks & Wildlife Service** discussed the **Application of habitat mapping in monitoring of designated areas**. The Coastal Monitoring Project is the assessment and implementation of a rapid and easily applicable monitoring methodology. The project involves the monitoring of Irish sand dune habitats encompassing both designated and non-designated sites with sites were being digitally mapped using a GPS system. This would enable an assessment of the condition and the conservation status of EU Annex I sand dune habitats. The final results would feed into the report on habitats and species, which will be submitted by the NPWS to the European Union by the end of 2006. In addition, the results would assist in the planning of management strategies; particularly where decline in habitat condition had been recorded. An example and some results of the survey from Bull Island in Dublin Bay were included to illustrate the project.

The final discussion concluded with many unanswered questions. There was though an overall interest to pursue the following:

- Whether the Heritage Council scheme would be updated and who would lead this.
- The potential use of standard habitat mapping for agri-environmental plans and liaison with the Department of Agriculture on this.
- The whole area of actual mapping and use of GIS.

Scottish Newsletter

The Scottish Section has circulated its first electronic newsletter, covering events, training courses, the Scottish conference and more. The Scottish Section Committee is also looking for ideas, from you, the Scottish members.

If you have not received the newsletter it means that the email supplied to IEEM HQ is out of date. Have you or your company changed email addresses? Under the Data Protection Act we can only use a new email if you supply it to us yourself. Don't miss out on events, activities and opportunities for continuing professional development. Please email enquiries@ieem.net with your new email.

Reedbed Restoration and the Return of the Bittern

IEEM North West (Shadow) Section

RSPB Leighton Moss Reserve, Lancashire, 7 September 2005

The third meeting of the NW Shadow Section rounded off a successful first year with a visit to RSPB's Leighton Moss reserve to see major reedbed restoration works in progress as part of the EU-LIFE Bittern project. Our thanks go to our hosts Robin Horner (site manager), Sarah Alsbury and Harry Bowell of the RSPB Bittern LIFE project and Will Bond AIEEM of Alaska Environmental Contracting Ltd for the background presentations, field visits and live and mucky demonstrations of mud-pumping! All in all it was a topical and informative excursion.

As we know there is a massive international effort underway for the protection, management and restoration of wetlands. The bittern *Botaurus stellaris* as an early coloniser of reedbeds is very much a flagship species in this work and its continued survival is supported by management strategies at EU and national levels. The simple rule of thumb is that if you can attract and hold breeding bittern then the overall condition of your reedbed habitat is favourable.

In the United Kingdom bittern became extinct in 1886 but naturally re-colonised in 1911, the population rising to about 80 booming males by the 1950s. But the drainage and fragmentation of wetlands, along with a lack of management of reedbeds, severely affected the population, which fell to 11 booming males by 1997.

Bittern are associated with extensive stands of reed where they feed on aquatic vertebrates and invertebrates. Whilst they require thick cover for breeding they feed in the transition zone between shallow reed fringes and deeper water. The decline of the species is thus linked to the loss of both quality and quantity of reedbed habitat. Traditional management of reedbeds by reed-cutting maintained them in good condition for bittern. With less reed-cutting today many reedbeds have dried out through neglect or been drained for agricultural use.

In the UK breeding and over-wintering bittern are given protection through the designation of Special Protection Areas (currently 10) supporting about 90% of the population.

The UK Species Action Plan for bittern identifies targets to:

- 1 halt the decline in the population in its present range and start to increase the population and range;
- 2 increase the population to some 50 booming males by 2010 by ensuring the management of existing reedbeds;
- 3 initiate work to secure a long-term population of over 100 booming males by 2020 and,
- 4 encourage creation of at least 1,200 hectares of new reedbed in blocks larger than 20 hectares.

Efforts to halt the decline and begin to implement these targets were boosted by the LIFE project '*Urgent conservation action for the Bittern Botaurus stellaris in the United Kingdom*', which ran from 1996 - 2000 and undertook habitat improvement works at fourteen sites in the UK, mainly in East Anglia. The project focused on former breeding sites and completed a range of habitat management and restoration actions.

Techniques such as water level control, construction of dykes and channels,

reed cutting and bed lowering were all used to improve the condition of the sites. Overall, this first LIFE project rehabilitated some 400 ha of reedbed, 54% of the then national target in the UK Species Action Plan. By 2001, the number of booming bittern had risen to over 30, but it also became clear that the focus on the most productive sites did not fully take into consideration the need for young birds to disperse to new sites. It was important, therefore, to take a network approach to the conservation efforts, by both creating more sites and by reducing the distance between sites to provide links between four metapopulations in the UK.

A successful application was made to the LIFE programme for a follow-on project in 2002 '*Developing a strategic network of SPA reedbeds for Botaurus stellaris*'. The overall aim of the current project is thus to develop a much wider network of reedbeds suitable for breeding and wintering bittern and to further increase the population from 30 to 65 within ten years of the end of the project. The project is working with a partnership of eight organisations across 19 sites in England and is supported by ongoing studies into bittern behaviour, habitat and diet. The IEEM visit to Leighton Moss coincided with a two-day partners' workshop. It was good to join RSPB site managers and other partners from all over the UK in visiting the project and asking, hopefully, sensible questions!

The strategic network of sites to be developed over the next few years will be achieved by targeting resources at specific locations likely to be colonised by bittern, but generally away from the current core population. New reedbeds have been created by modifying the landform and managing water levels along with the planting and protection of reed rhizomes. Newly planted reed usually has to be protected from grazing by geese or, as WWF Martin Mere has discovered in their work, by coot.

Where potentially productive reedbeds have dried out and channels have filled with accumulated silt, large-scale engineering operations are often necessary. The largest of these projects in the UK, at Leighton Moss, demonstrates the techniques of bed-lowering to remove layers of accumulated litter and mud-pumping to remove the accumulation of silt from pools and channels. Maintaining access and suitable conditions for fish species, such as eel, rudd and perch, forms an essential element of the work.

Leighton Moss has an interesting history. Its recent origin comes from the original raised bog habitat drained for agricultural use in the 1800s. In the First World War it became uneconomic to continue pump drainage and this was abandoned in 1917 allowing the land to rapidly flood again and gradually revert to reedbed. Leighton Moss was taken over as a nature reserve by RSPB in 1964 following the colonisation of the site by bitterns in the 1940s. During the national decline in bittern Leighton Moss was, by the 1990s, the only remaining site in the north west with five booming males; this has now reduced to two. The decline is partly explained by isolation and a lack of new sites for dispersing young. The overall LIFE project is addressing this problem by the creation of new areas of reedbed in adjacent sites at Barrow Scout and Silverdale Moss so, at least, any young fledged at Leighton Moss in coming years will have new sites to colonise.

The main problem though at Leighton Moss is probably the build up of up to a metre of soft silt in the ditches. The proposed solution was 'mud-pumping' to remove the silt build up combined with bed lowering on the 'firmer' ground to create a mosaic of shallow and deeper water with plenty of edges to provide suitable feeding habitat. The scale of the project is large by UK standards and has involved considerable innovation by Alaska, the chosen contractor. Robin Horner and Will Bond were on hand to explain how projects of this scale and complexity are very much a partnership effort between client and contractor although Will did emphasise that it is the contractor who bears most of the risk!

The works on the ground entailed the removal of sediment build up from ditches by mud-pumping and the spreading of the material on adjacent farmland. Permissions are required from the farmers (who can benefit from the rich material), the Environment Agency and English Nature. Partial de-watering of the pumped material reduces the need for deep storage lagoons.

Unless the new material in the fields is pointed out by guides such as Robin, a casual visitor today would not see any evidence of the works one year after completion. Reedbed restoration projects are incredibly messy undertakings, but have an amazing capacity to hide the evidence in a short period.

The specialised equipment brought in by Will Bond was demonstrated Hymac top-halves on Florida-swamp style floating tracks! Two machines were in use; one would feed dredged mud and rhizome material into a specialised pump mounted on the second machine. It's not easy to pump *Phragmites* rhizome so Will had devised a system of cutting blades built into the bucket of the excavator to sort of pre-digest the offerings! Other inventions in use on site included a 21st Century paddle-boat, which would not look out of place in the Everglades. The work will continue at Leighton Moss for the remainder of this year and we will have to wait and see how the bitterns will respond to the refurbished Leighton Moss and the attractive satellite sites waiting for colonisation.

By 2005, the current LIFE project will have created 300 ha of new reedbed, restored over 50 ha of reedbed and either created or re-profiled over 30 km of ditches. The efforts to rescue the declining population of the bittern in the UK are surely on course for success. However, it is acknowledged that the on-going management of a network of sites, often disconnected from natural floodplains will be expensive. The project partners are therefore addressing some serious questions such as where do we get the resources to maintain reedbeds in the future, can reed-cutting become more efficient and how do we get bigger, wilder, wetlands? We wish the project every success and look forward to a return visit in a few years to judge for ourselves.

For more information on the project visit www.bitterns.org.uk

NW (Shadow) Section... Moving On

Following the presentation on Strategic Environmental Assessment at the last meeting of the NW Section, there was a brief meeting regarding the future of the Section.

Since its launch at Southport in 2004, the Shadow Section has been co-ordinated by Paul Rooney, who has organised a series of events for the benefit of IEEM members in the NW. Paul would now like to see the Shadow Section formalised and to have a Section Committee to co-ordinate events and activities. To do this it is necessary to call a Section Annual General Meeting and to adopt a Section constitution (similar to other Sections). A call at the meeting for members to put their names forward to assist on a Section Committee elicited several offers.

All members in the NW will be contacted during the coming months, to give notice of an AGM and to seek nominations for the Committee.

Any suggestions or ideas for meetings throughout the NW are welcome. Please contact rooney@hope.ac.uk

Correction to *In Practice* 50 – December 2005

The Conference write up of the presentation given by Mathew Frith on page 17 of IP50 referred to two housing developments - Imperial Wharf and Ropetackle. These had been used in his presentation not as particular examples of good practice, nor as examples of social housing as suggested. We apologise for any misinterpretation that there may have been.

Carl Bro is an equal opportunities employer and welcomes applications from all sections of the community.

www.carlbro.co.uk

Carl Bro 



are you **looking**
to progress a little faster?

At Carl Bro, we pride ourselves on investing in our staff in order to raise the excellent level of service we offer to our clients. We believe this is the true means of differentiating ourselves within the industry.

Principal Ecologist
(competitive salary + benefits)

Our environment team in Leeds is looking for a highly experienced ecologist and project manager to assist in the on-going development of our ecology team, providing specialist advice on ecology, EIA and ecological restoration projects to a range of public and private sector clients.

If you have 10+ years professional consultancy experience, detailed knowledge of protected species and associated legislation, extensive experience in designing mitigation strategies for minimising any impacts on habitats and species of conservation importance, strong project management experience and the ability to mentor and develop junior staff, join us and you could progress faster with Carl Bro.

Visit www.carlbro.co.uk/vacancies for further details on the role and the company. Alternatively, contact our **Human Resources** department on **0113 262 0000**.

Woodland Management and Creation in the North Pennines Area of Outstanding Natural Beauty

The first North East Section event of 2006 saw some 25 attendees get together at the offices of Northumberland National Park Authority in Hexham to hear Peter Samson MIEEM, give a presentation on woodland in the open landscape of the North Pennines Area of Outstanding Natural Beauty (AONB). The North Pennines AONB Staff Unit has benefited from the accord between the Forestry Commission and the National Association of AONBs which resulted in the appointment of Fiona Corby MIEEM as AONB Woodland Adviser in June 2004. Fiona worked in both the North Pennines and the Northumberland Coast AONBs for a period of just under 18 months before moving to take up a new post with Rural Development Service (Leeds). The project is funded by the Forestry Commission North East Conservancy. Peter's talk covered work undertaken by Fiona and placed woodland creation and management in the North Pennines AONB in a wider landscape, historical and policy context. The following summary was kindly provided by Peter (from whom further information may be obtained by email at peter@northpenninesaonb.org.uk).

Woodland is a small but important component of the North Pennines landscape with only 2.6% woodland cover (5,128 ha or just under 2000 km²); of these woodlands 62% is coniferous, 18% is ancient semi-natural woodlands (ASNW) and 10% is plantations on ancient woodland sites (PAWS). However, both English Nature's Natural Area Profile and the Countryside Agency's Countryside Character Assessments do consider the woodlands in the North Pennines to be important. The Countryside Quality Counts initiative (*In Practice* 49, September 2005) finds that between 1990 and 1998 the change in woodland cover in the North Pennines has been largely consistent with its character.

Relatively little is known about the history of woodland in the North Pennines but we can get some fascinating glimpses through archaeological work. Gledhill and Nichol did extensive work on iron smelting in Upper Teesdale and found 376 sites where charcoal had been produced in the past. Some of these are now on open moorland without any associated tree cover. Pollen analysis shows a wide range of tree species including birch *Betula* spp, Hazel *Corylus avelana*, Alder *Alnus glutinosa*, Willow *Salix* spp, and *Rosacea* such as Rowan. Evidence from other sites such as the Stanhope Deerpark in Weardale shows similar patterns.

Surveys over recent years, through the Northumberland Native Woodland Project and by the AONB Woodland Adviser, show that much of the native woodland resource in the AONB is under severe pressure. Grazing of often small areas of woodland continues to be a major problem. This is exacerbated by the fact that many of the land managers undervalue their woodlands, lack the skills to manage woods on the holding and tend to not incorporate its management into their land management practice. In addition, recent changes in agricultural, environmental and woodland support have led to some uncertainty, with few land managers willing to be persuaded to take any action on their woodlands.

Having said that, there have been some notable successes that are contributing substantially to the delivery of the North Pennines AONB Management Plan (2004). Further action is planned that will help with the implementation of the Regional Forest Strategies.

The Forestry Authority's Jigsaw Challenge Scheme, which is aimed at linking or extending ASNW sites, has contributed to a substantial increase in the cover of new native woodland, in this area, most notably on the RSPB Reserve at Geltsdale. On the reserve some 200 ha of wood pasture has been planted taking full account of the extensive industrial archaeology on the site. This Bruthwaite woodland planting scheme, within Geltsdale, was one of the winners of the first AONB Conservation Awards in 2005. The contribution of agri-environment schemes such as Countryside Stewardship and the Environmentally Sensitive Area Scheme has also been substantial,

largely through individual Conservation Plans. The AONB Staff Unit is now working with partners on a submission to the Heritage Lottery Fund under their Landscape Partnership Schemes to stimulate further action on management of ASNW and PAWS woodlands and the increase in the cover of native woodland in appropriate locations.

The assessment of the woodland resource in the North Pennines AONB and the subsequent prioritisation provides an important tool to DEFRA, the Forestry Commission and other advisers in discussions surrounding new applications to the various environmental management schemes. For instance, through this work DEFRA advisers will be aware of the priority woodlands in the AONB and be able to flag this up in any application for Higher Level Stewardship.

The potential conflict between planting of new native woodlands and archaeology has already been mentioned. In an area like the North Pennines AONB with an important industrial archaeological resource, it can be very difficult to recognise features. For instance, it may be difficult to tell the difference between a 'hush', a man-made landscape scar associated with lead mining and a natural upland gill, which might be a priority for woodland planting. In addition, much archaeology remains undiscovered. The AONB Partnership has made a start on trying to resolve this issue by bringing together professionals working in both fields and running a series of workshops aimed at increasing understanding of the archaeological resource of the North Pennines. These workshops have now led to an initiative to create an archaeological workbook, which will provide advisers on the natural environment with an easy-to-use tool when out in the field.

The woodland component of the AONB landscape may be small, but is important both in the landscape and for biodiversity. The AONB Management Plan sets ambitious targets to improve the management of these woods and increase the native woodland cover but current uncertainty in land management support has led to a situation where progress towards these targets is difficult to achieve. However, it is expected that through precise targeting and via different funding avenues the important woodlands in the North Pennines AONB might still be better managed and buffered by appropriate new planting.

In Practice

If you would like to write an article
for the next edition of *In Practice*
please send it to Jason Reeves at
jasonreeves@ieem.net
by 15 May 2006.

If you have any other ideas about
the content or layout of *In Practice*
or would like to become part of an
Editorial Board please also contact
Jason with regard to this.

Records - To Do or Not To Do?

Jacqui Green CEnv MIEEM

I have always considered one advantage of being an IEEM member to be the opportunity to network, to discuss issues of mutual interest or concern, or perhaps even to take action as a group. For sole traders, lone workers or people working from home without the benefit of large offices and support of departments with varying expertise, the opportunity to discuss concerns or even to let off steam, can be very useful. So here is my vent/or rant. This may be my article, but many of the comments and concerns have been expressed to me by a number of people.

As ecological impact assessments, ecological appraisals etc, develop there is an increasing requirement to undertake desk exercises to acquire existing data. This is very valuable, especially as many site specific surveys do not have the luxury of more than one year's survey seasons. To be able to see what unusual species have been recorded in the local vicinity in the past can be useful in directing surveys, or including mitigation even if a species is not found during a particular survey session.

However, the provision of this data has itself become an industry. Knowing that including a desk study is almost without exception a requirement, data holding groups have been able to charge what they like, or even to attach draconian conditions to the release of the data.

I remember having just such a conversation as this years ago with leading proponents of the biological records centres (BRC). Most of these BRCs have now standardised their charges and contracts. I am happy to pay a reasonable rate for information, and, in my recent experience, the BRCs are producing the goods for a professional and reasonable fee. My experience with more specialist, usually County, recording groups, is less happy. My concerns appear to be being echoed by my colleagues, and are broadly divided into two groups. The first, possibly the most obvious, is the high charges for what often turns out to be extremely poor information; the second issue is less transparent and related generally to ownership of data.

Charges for Data

Below I give some examples of issues I find disconcerting if not worrying. These examples have been told to me as actual situations encountered; some, but not all, are my own experiences:

- Charges considered out of proportion to the data received. For example one person was charged £100 for a data search for a single species (bats) for a single structure, with the result that the group said they had no data for that feature.
- Charges at the highest end of the scale of ecological fees, but taking many (over ten in one case) weeks to respond. If groups want to charge as consultants they should be required to meet working requirements of consultants, including meeting tight deadlines.
- I was advised by one Badger group that the high fees were required to pay for the costs of doing the surveys, or to fund future surveys. Whilst this is a laudable aim, I do not believe this is legal. I was informed by a BRC director that everyone who sends in records for free has to agree to the selling of data to other parties. To avoid the administrative nightmare this would involve, the data is not actually sold, but is given for free. The cost is in fact an administration fee and should reflect the time taken to extract the data.
- I have encountered on three separate occasions, situations where private gardens have been included in County Wildlife Sites. The owner has only become aware that their garden is a CWS when putting in a planning application for single or small scale development, and to have the local Wildlife Trust object. Apart from the cost incurred to employ an ecologist to survey their lawn, and to guide them through the wildlife planning system, they then have had to pay for the data, map and citation for the CWS. Apart from the obvious question as to how the Wildlife Trust knows what is in a private garden (I find that the map line is usually drawn around a convenient feature and they have not in fact looked at the garden, which begs another question about the standard of work and validity of CWS designations!), it is very bad PR for conservation, local site protection, and the County Wildlife Trust movement. Such antagonism of small landowners and local residents only gains bad feeling and no friends.

Contracts for Data

Some specialist recording groups now have contract conditions that require the receipt of the data acquired as a result of surveys for a given project, to be handed to them for free. Whilst in principle I have no problem with giving data to *bona fide* groups this can present problems with clients (a secondary question is why should they expect to receive data for free when they charge so much for giving it out?). It is practice and usually a contractual obligation for survey information acquired as part of a commercial contract to be owned by the client and not the surveyor. Unsurprisingly, the client will want to use the data they have paid a lot of money to acquire, for their own purposes before it is put into the public domain. It is unusual for a consultant (of all persuasions, not just ecologists) to retain data ownership. To insist on retention of data, maps, etc, is likely to result in that particular consultant not being awarded contracts. Usually, it is not possible for consultants to give away data, but in some cases e.g. work for local planning authorities, data may be given out under the Freedom of Information Act. I usually advise the interest group that it comes into the public domain when a planning application is put in, and therefore they can then get it for free then. But this may be many months, or maybe even years down the line, when a consultant has moved on to other projects and is not in a position to monitor all planning applications and to pass on the information to myriad groups. Is it unreasonable to expect those groups to do this bit for themselves?

If groups are going to insist on provision of survey results for free as a pre-condition of selling data required as part of a data search, what action can we take? If our contracts say we cannot do this, and they usually do, this may become an increasing problem. I have in extreme cases, declined to use a particular group's data, and explained in my report that the omission is due to unreasonable demands which could not be met. If more people did this perhaps the extreme groups would realise that they are not going to find a market for their product. In this case the losers would be the wildlife we are trying to protect.

Am I alone in feeling concerned about the direction that data provision is taking? Is there anything to be done about it?

Letter to IEEM – Records

Dear Sirs

I would like to make a plea for all IEEM members who work in consultancy to send survey data into the relevant Local Records Centres (LRCs). I know from experience that when one project is finished and there is pressure to start the next one, the last thing on a consultant's mind is sifting through reams of data and getting it sent off to a LRC. And often when a site is to be developed and the fauna and flora lost you think 'what's the point', or perhaps there are confidentiality issues relating to your client.

Consultants often uncover species that are rare and possibly not known from the area surveyed; this type of data is of vital importance to help local conservation organisations target their efforts. In Devon, I have been involved in a voluntary project run by the local Amphibian and Reptile Group and LRC to assess the status of Great Crested Newt in the county. This is largely unknown as the existing records for the species are very scarce and mostly at least ten years old. Nevertheless, we are always hearing 'on the grapevine' that one consultant or another has recorded them in various places, usually on new sites and sometimes completely new areas. Sadly such data rarely reaches the LRC, hampering our survey efforts considerably.

It is part of our professional code of conduct as IEEM members to make data available to LRCs if possible. Such actions can have significant positive impacts on local conservation efforts - so please endeavour to pass on potentially important records such as BAP or protected species at the very least.

If any local IEEM members are interested in volunteering for the Devon GCN survey project please contact Ellie Bremner at the Devon Biodiversity Records Centre ebremner@devonwt.cix.co.uk.

Yours faithfully
Nicky Green CEnv MIEEM



IUCN HEADQUARTERS AND GENERAL NEWS

A symposium in The Hague, the Netherlands was hosted by the IUCN on how natural resources can sustain people's livelihood. Achim Steiner, IUCN Director General, gave a keynote lecture encouraging the environmental community to take note of the human dependence on natural resources and what ecosystems can offer to protect people's livelihood.

On the 13-15 February 2006 the chairs of the national and regional committees of IUCN met in The Hague, the Netherlands to re-define their roles in a more efficient, active and democratic Union.

The IUCN Regional Office for West and Central Asia and North Africa (WESCAN) has been granted Observer Status by the Council of the Arab Ministers Responsible for the Environment (CAMRE) within the Arab League.

Valli Moosa, IUCN President, has highlighted the role of cities in biodiversity conservation at the World Congress of the International Council for Local Environment Initiatives (ICLEI). He has also called for the conservation movement in socio-economic development to be more forward in its role in post-earthquake Pakistan. The President had a series of high level talks on a recent visit to Pakistan in which he supported environmentally sound reconstruction following the earthquake. A joint bulletin by IUCN, WWF and CARE International has highlighted the fact that environmental hazards such as the danger of flash floods and more landslides are still a concern in the areas affected by the earthquake.

Three fellows selected by the IUCN for the Conservation and Sustainability Programme, funded by the Alcoa Foundation, have presented their research proposals at a recent visit to the IUCN Headquarters in Gland, Switzerland.

The Government of Mauritania in West Africa has asked for the assistance of IUCN to guarantee that the exploitation of oil in Mauritania meets the highest international environmental protection standards.

BIODIVERSITY AND CONSERVATION

On 20-31 March the 8th Conference of Parties (COP8) on the Convention on Biological Diversity (CBD) will be held in Curitiba, Brazil. The Union will set out recommendations to the parties for achieving the 2010 target to significantly halt the loss of biodiversity at all levels. Position Papers for COP8 are available at www.iucn.org/cbd/papers.htm.

In addition to COP8 there are the Virtual Curitiba Biodiversity Conference and the Global Biodiversity Forum. Both will aid COP8 address the key issue of biodiversity loss.

It has been found that the capture and trade in the Roti Island Snake-Necked Turtle *Chelodina mccordi* has not been carried out according to the laws of Indonesia. The turtle is found only on the island of Roti in eastern Indonesia and is now all but extinct in the wild.

For the first time ever the 13 countries that cover the wild range of the endangered Asian elephant have met to discuss the future of Asia's largest mammal. The focal point of the meeting in Kuala Lumpur, Malaysia was regional agreement on how to secure a future for the species and the need for cooperation between countries.

A recent meeting in Johannesburg, South Africa organised by IUCN and the Wildlife Conservation Society (WCS) on the future conservation of lions in eastern and southern Africa concluded with a new strategy for lion conservation in the region.

To promote traditional knowledge and understanding of endangered plants in North Africa the IUCN has launched a new *Guide to Medicinal Plants in North Africa*. The guide was launched at the 4th Meeting of the Ad Hoc Open Ended Working Group on Access and Benefit Sharing in Grenada, Spain.

WATER AND WETLANDS

On 5 and 6 February 2006 the Union met in Bangkok, Thailand at the Asia Water Workshop to improve contributions to existing and future water challenges facing Asia. Water resources in Asia along with unequal distribution and cross border cooperation are in need of attention and the workshop highlighted the link between ecosystems and livelihoods.

IUCN and the Italian Ministry of Foreign Affairs have launched a new water programme for West/Central Asia and North Africa. The three-year programme will be funded for the first year by the Italian Government and aims to help the region adopt a universal approach to freshwater management.

IUCN has shown that wetlands reduce the risk of flooding. The Zambezi wetlands case study carried out in Namibia and Zambia showed that wetlands regulate water flow and reduce the chances of flooding downstream.

The International Symposium on Groundwater Sustainability in Alicante, Spain in January declared that the world needs to take greater care of its groundwater reserves which are being increasingly threatened by overconsumption.

IUCN and its partners in the Nairobi River Basin Programme have begun the third phase of the programme that will help to provide clean water for the Kenyan capital and further downstream. The river ecosystems of Nairobi are currently being heavily polluted by industries, commerce, agriculture and household wastes.

FISHERIES AND OCEANS

The final report of the High Seas Task Force, *CLOSING THE NET: Stopping Illegal Fishing on the High Seas*, has included proposals for a global database to track down illegal fishing vessels and new guidelines for regional fisheries management organisations to combat illegal, unreported and unregulated (IUU) fishing and sustainably manage the resources of the seas.

Five species of deep sea fish have shown dramatic declines due to aggressive fishing practices. Roundnose grenadier *Coryphaenoides rupestris*, onion-eye grenadier *Macrourus berglax*, blue hake *Antimora rostrata*, spiny eel *Notacanthus chemnitzii* and spinytail skate *Bathyraja spinicauda* have declined by as much as 87-98% between 1978 and 1994 in the northwest Atlantic.

As a result of findings by a workshop hosted by the Joint Nature Conservation Committee (JNCC), which looked at the conservation of shark and ray species in the Northeast Atlantic and Mediterranean, the number of species on the IUCN Red List of Threatened Species will increase.

FORESTRY

In response to the challenges of deforestation in Ghana the IUCN has begun Forest Landscape Restoration. Ghana has lost 1.2 million hectares of forest since 1990 and the current rate of deforestation is estimated at 3% per year.

The latest issue of *arborvitae*, the forest conservation newsletter published jointly by IUCN and WWF, is examining the real value of forests and forest products. The full *arborvitae* PDF is available on the IUCN website.

CHINA

China is currently formulating its first Protected Areas Law. Protected areas currently cover 15% of China's territory and the new law is urgently needed as an adequate legislative framework. An International Symposium on China's Protected Areas Law was held in Beijing on 15-16 February 2006.

The Three Parallel Rivers World Heritage Site in the Yunnan Province of China is incredibly biodiverse. International experts and Chinese Government officials met for a workshop in January to agree on a roadmap to declare a national park and contribute to the economic development of the site including options for ecotourism and benefits for local people.

(For the full reports on these and other news stories please visit www.iucn.org/en/news/news.htm.)





Extract from EFAEP Bulletin 8, February 2006:

(To view the complete Bulletin please visit www.efaep.org.)

Introduction

Dear colleagues,

It was hard but fun work on that wintery meeting day, at the Free University in Amsterdam, where an 'informal' Assembly discussed the way forward. We debated 'content', considering what services to offer to our members, based on the outcomes of last year's questionnaire that so many of you answered. However, we spent at least as much energy on 'process': how to optimize communications, how to overcome the all too normal barriers to effectiveness that characterize a volunteers' organisation, and how to integrate EFAEP better into the inner workings of our member associations. The resulting action programme will be put on the web site as soon as it is finalised, so that everyone interested can see where he/she wants to contribute and benefit.

Meanwhile, we're beginning to attract attention from the outside as well as from more people within our member associations. We're opening talks with various new organisations of environmental professionals that approach us for membership or cooperation. And more and more environmental professionals start to discover the returns of their 1 per annum investment in EFAEP; they are pleasantly surprised, e.g., with our frequent updates on EU legislation and policy.

As a result, within some member associations (e.g. the Dutch VVM) Boards are making plans to improve direct lines of communication between their members and the rest of EFAEP. A first simple step is of course the electronic distribution of this bulletin to every association member. Thus, our network will quickly become a very valuable tool for exchanging knowledge and relevant information among the 12,000 of us. A network that can soon be approached via the Database of Environmental Professionals that is now rapidly taking shape.

If you feel your organisation, career or daily work can benefit from being part of the developing vibrant EFAEP network: let us know you're there and how you want to participate, and we'll gladly take you on board!

Jan Karel Mak, President

Action Plan 2006-2008

The Assembly meeting last December was dedicated to the production of the new action plan. After some small working groups had been set up, the first task was to define what topics EFAEP should focus on, based on what members have said they find most important in the 2005 questionnaire. The second task was to determine how this could be achieved, based on finding the right people, building teams and getting results. The minutes of the meeting are available on the website if you are interested in the outcome from the groups.

One of the findings was that actions were best undertaken by teams of two! Two people can stimulate each other and keep the pressure on; more than two and each sits and waits for someone else to take action. Based on this a team of two, Jan Karel Mak (VVM) and Mike Barker (IEEM) went to work during December/January to develop an Action Plan for the coming years.

Activities are grouped under the following themes:

- Internal communication/activity
- Recognition/familiarity EFAEP with members
- EFAEP base documents
- Knowledge exchange
- Influencing EU Policy

EFAEP President Jan Karel Mak is in the process of organising the results from the break-out sessions. The draft Plan has been sent to the ExCo for review and once their comments have been incorporated the document will be sent to the General Assembly and published on the website.

Database of Environmental Professionals

The informal Assembly meeting last December highlighted the importance of EFAEP as a network for environmental professionals to find their European colleagues. An important tool for this will be the Database, of which the Stage 2 development will be released in March. A particular point of attention has been the classification of skills and expertise as each country and discipline has its own system. After discussion amongst the testers a new multi-criteria classification system is now being implemented. In order to be involved in the ongoing DBEP development, you can join the group of testers by sending a request to the following email address: international@ingegneriambientali.it

Introduction of members: VBU, Germany

To work together it is important that Member Associations know each other. This new section will therefore ask each Association to write about themselves; who their members are, what the topics of interest are, what they bring to and hope to get from EFAEP and the contact with other member countries.

'VBU (Verband der Betriebsbeauftragten für Umweltschutz e.V.) was founded in 1988 as an association of environmental professionals. It has about 650 members in all industrial sectors and is one of three German members of EFAEP since this organization of environmental professionals was founded more than three years ago in Düsseldorf.'

'Most of the German industrial production areas need an environmental professional, who has to control and to raise the environmental standards.'

'VBU represents the interests of these employees regarding their professional, economical, social, political and legal concerns. This representation of interests belongs to the core-competences of VBU. In this meaning VBU is engaged in politics and participates in legislation. VBU gives protection and support in all legal questions and legal affairs in connection with their professional concerns (for example: environmental law, labour law, criminal law).'

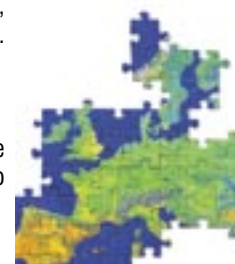
'VBU gives the opportunity for an interchange of views and opinions, of environmental knowledge and experiences concerning to topical tendencies in the specific industrial sectors in special meetings. The idea behind this is to create a kind of national network for all members. So they can ask experts for solutions, if there are problems to handle some kind of waste.'

Events in 2006

- The international conference 'World sustainable energy days 2006' took place in Wels, Upper Austria, from 1-3 March. The conference was aimed at contributing to awareness-raising on energy and sustainability issues, and offered a unique combination of events on sustainable energy production and use, covering energy efficiency and renewable energy sources for buildings, industry and transport. For further information, please visit: <http://www.energiesparverband.com/esv/index.php?id=228&L=1>
- 9th International Symposium on Metal Ions in Biology and Medicine, 21-24 May, Lisbon, Portugal. For further information: www.uc.pt/9ismibm/.
- HB 2006: Healthy Buildings, Creating a healthy indoor environment for people, 4-8 June, Lisbon, Portugal. For information: <http://paginas.fe.up.pt/hb2006/html/hb2006.html>.
- ESREL 2006: Safety and Reliability for Managing Risk Conference, 18-22 September, Estoril, Portugal. For further information: www.esrel2006.com.

Last But Not Least

- Suggestions for organisations that could be interested in joining EFAEP can be sent to Matthias Friebe, M.Friebe.GWoe@t-online.de
- Bulletin 9 is due to come out in July 2006.



The Society is going from strength to strength and the 4,000 mark for Chartered Environmentalists (CEnvs) is about to be passed. IEEM has continued to process the remaining applications from the rush received in September (mostly on the last day!) and I am pleased to report that the backlog has been all but cleared. More thanks are due to Anna Thompson and the reviewers who just possibly may be regretting that IEEM ever signed up! As it stands at the moment IEEM is second in the number of CEnvs, only just behind CIWEM.

Apologies to those that have had to wait quite a while, especially those whose CEnv application was dependent on first being approved as a Full Member of IEEM. The Membership Admissions Committee itself is processing IEEM applications at previously unheard of levels but as we are dependent on the time of our hard working volunteers, there is a limit as to how quickly these applications can be processed. It does of course occasionally happen that not everyone who applies for Full Membership of IEEM has the necessary experience and qualifications and so it is unfortunately inevitable that just a few people who have had to wait for their membership of IEEM to be processed, find that they have not been awarded Full Membership and so cannot now become CEnvs through the Grandparenting route. Equally, it has turned out that some CEnv applications have had to be turned down because despite being awarded Full Membership, the combination of experience and qualifications did not add up to the necessary 12 points. For some there will be the opportunity to apply again.

However, the Grandparenting route to entry has now passed and I am pleased to report that the Registration Authority of the Society has approved a revised Practice Direction, which lays out the process whereby new applications for Chartered Status can now be processed. Alex Tait, the other Board Member from IEEM, has played a part in developing these processes. It may come as a shock to some IEEM members but the 'Full' process is no easy matter. To become a CEnv an applicant must:

- be a Full (voting) member of a licensed body;
- have a minimum of 12 units of knowledge and/or experience;
- demonstrate knowledge of, competence in and engagement with sustainable management of the environment; and
- agree to comply with the Society's Code of Ethics and CPD requirements of their licensed body.

The process is that the applicant will first complete an initial application form. If the candidate has satisfied the defined criteria – he or she will be invited to submit a report to the licensed body. This report will be a substantial document that demonstrates the relevance of the applicant's qualifications and experience. The report will be assessed by a panel established by the licensed body and the applicant will then be called to a Professional Review Interview (PRI). The PRI will normally last for 40 – 60 minutes. IEEM has decided that in order to comply with the requirements of the Society, a charge of £200 will be applied, which also includes the initial registration and joining fee (£50). The difference will be used to cover the costs of the assessment

process, including the travel expenses of the interviewers for the PRI and its subsequent assessment and administration. All this may seem to be a step removed from current IEEM practice, but if ecologists are to be regarded as being on equal terms with other professionals they must be prepared not only to undergo but achieve success through the sort of processes that are well established in other professions – e.g. engineering. The interviews will be scheduled at regular intervals most probably every three months and prior notification of the dates will be given on the members' section of the website.

So what of the Society itself? David Hickie, the new CEO, is settling in well. He has set up an office in Atherstone and now has two assistants, Kerry Geldart and Trish Hall. Kerry will be leading on external affairs matters and helping develop the website as the Development and External Affairs Manager. Trish will be leading on CEnv registration and secretariat support for the Board and Committees as the Secretariat and Membership Manager. Both will be working from the new Midlands office which is slowly taking shape.

John Gilliland, Sustainable Development Commissioner for Northern Ireland, gave an inspirational inaugural Society lecture on the challenges and opportunities in creating a sustainable future to a large audience of SocEnv environmental professionals in Belfast last December. The External Affairs Committee of the Society is keen to promote a series of other regional events such as this across the UK. If you are interested in helping organise such an event, please contact Kerry Geldart kerry.geldart@socenv.org.uk.

The Society is also working in partnership with the Olympic organising bodies to help ensure a sustainable London Olympics with a long-term worthwhile legacy.

The Chairman, Peter Matthews has also put forward the idea of environmental empathy being an integral part of citizenship. This fits in very much with the idea of sustainability having not just an environmental but also a social and economic context.

The Society has also started a dialogue with the Academy of Experts and in developing the concept that being a CEnv could be a passport to being an environmental expert. Expert witnesses need not only to be conversant with their particular area but also to know how to perform effectively in court or at a public inquiry.

The Society is now looking to develop its website into a much more dynamic format which will provide CEnvs with an information gateway to environmental management and sustainability matters. The 'knowledge hub' will provide signposts and links to a wide range of environmental information. Ideas for areas that would be useful to you are needed. Please contact Kerry with suggestions. The website will be developed over the next six months to be re-launched in the autumn. In the interim, the existing website will have new enviro-briefing and events web pages. These will be the forerunner of pages on the new website. The new website will also include a range of examples of what CEnvs do for a living. Please send in your details if you would like to be considered for inclusion in this section.

So in a nutshell the Society is moving forward with vigour and CEnvs can soon expect its lofty goals to begin to be realised.

CHARTERED ENVIRONMENTALISTS – Recent Awards

Dr Elizabeth Allchin, Ms Caroline Arkley, Mr Michael Armitage, Mr Richard Arnold, Mr Jeremy Bailey, Miss Helen Ball, Mr Simon Barker, Ms Trina Barrett, Mr Nigel Baskerville, Mr Phil Belden, Mr Alan Bell, Ms Sue Bell, Miss Anna Bendall, Mr Jonathan Bennett, Mrs Judith Bennett, Mr Richard Bennett, Mrs Vicki Bloomfield, Mr Anthony Blunden, Mr Matthew Bowell, Dr Polly Bown, Mrs Janice Bradley, Ms Katia Bresso, Mr David Broom, Mr Jonathan Burney, Dr Jon Capel, Dr Paul Chapman, Mrs Sarah Chimbwandira, Dr Matthew Clarke, Ms Sally Clifton, Mr Paul Cobb, Miss Janet Collins, Miss Rebecca Collins, Mr Richard Collinson, Mr Neil Coombs, Mr Carl Cornish, Miss Claire Cornish, Dr John Cortes, Ms Nicky Court, Miss Clare Crane, Dr Warren Cresswell, Mr Steve Crosby, Miss Karen Davies, Mrs Nicola Davison, Miss Louise Denning, Ms Julie Dewar, Ms Nicola Dunn, Dr Paul Duvergé, Mr Trevor Edwards, Mr Mark Elliott, Mrs Sarah Faulkner, Mrs Stephanie Ferguson, Mr Owain Gabb, Mr Henry Gallia, Miss Caroline Gettinby, Ms Joanne Goodyear, Miss Ann Griffiths, Ms Flora Grigor-Taylor, Ms Christine Hall, Ms Caroline Hanks, Miss Tessa Harding, Ms Sarah Harmer, Miss Alexandre Harper, Mr John Harrison, Mr Stephen Henson, Mr James Heslop, Dr Jonathan Huckle, Dr Joanna Hughes, Miss Rebecca Inman, Mr Patrick James, Ms Alison Jones, Mr Gregory Jones, Miss Annabel Keast, Mrs Lesley Kelly, Ms Zoe Kemp, Mr Ross Kennerley, Miss Charlotte Lamble, Dr Jeffrey Lewis, Mr Richard Lockett, Mr David Long, Miss Rebecca Longfield, Dr Paul Lunt, Mr Cameron MacIver, Miss Orla Maguire, Dr E. Jon Marshall, Mr David Martin, Mr Andrew McBride, Ms Elizabeth McKay, Ms Alison McKnight, Ms Gillian McKnight, Mr Andrew McNaught, Dr Kathryn Medcalf, Ms Linda Moore, Miss Isabelle Moriera, Mr Guy Morrison, Mr Paul Murphy, Miss Catriona Neil, Miss Patricia Neylon, Miss Gemma O'Connor, Dr Paul O'Donoghue, Mr Dave Ottewell, Miss Jennifer Page, Mr Philip Parker, Mrs Shirley Paterson, Mr Robin Payne, Ms Nicola Penford, Mr Mark H. Phillips, Mr Stephen Plumb, Dr Peter Reynolds, Mr Gordon Richardson, Dr Derek Robeson, Mr Timothy Ross, Mr James Russell, Mr Anthony Seymour, Mr Michael Slater, Miss Abigail Smith, Mr Simon C. Smith, Mrs Jane Southey, Mr Richard Spyyvee, Ms Caroline Steel, Mr Neil Stephenson, Ms Alexandra Stewart, Ms Caroline Stewart, Mr Giles Sutton, Dr Susan Swales, Mr Jeremy Taylor, Ms Susan Udall, Mr Michael Walker, Mr David Whitehorne, Ms Rhiannon Whitworth, Mr Ben Wild, Mr Howard Williams, Mr Michael Williams, Miss Faith Wilson, Mr Jonathan Winn, Mr Daniel Wrench, Mrs Karen Wright, Mr Ian Wrigley

Tauro-Scatology and Film Censorship

It is getting increasingly difficult to track down Basil O'Saurus, our resident Professor of Tauro Scatology, so many and varied are his extra curricular (and usually lucrative) commitments. Today, for example, we catch him just as he is pulling on his coat to head off to yet another important meeting. What is it today, Prof?

I'm just off to the inaugural meeting of the British Board of Wildlife Film Censors.

Another estimable quango that is completely unknown to myself and *In Practice* readers. You'll have to explain.

Simple. You all know about the British Board of Film Censors, who are responsible for the U, PG, 12A, 15 and 18 certificates that tell us what films are suitable for what ages. Well, the British Board of Wildlife Film Censors does exactly the same job, but for natural history films and TV programmes. **But surely these factual programmes are unlikely to corrupt youth in the same way that *Pulp Fiction* and *Trainspotting* might? Where is the explicit sexual content? Where is the foul language? Where are the drug references? Where is the gratuitous violence?**

It is subliminal, my friend, but it is there. And it is people like myself, raised in a less licentious age, who are ideally placed to spot the corrupting influences and make sure that the next generation are not exposed to anything unsavoury.

You are suggesting that you, tauro-scatologist *par excellence* should be the arbiter of the tastes of the next generation of ecologists? Tell me more...

Simple. Those *In Practice* readers who are of a similar generation to myself will remember David Attenborough's fantastic TV series *Life on Earth* and many will point to this as a formative influence, consolidating the textbook knowledge of biology learnt at school and setting them off on a course towards their present careers.

Absolutely. Fantastic photography, wonderful locations, superb commentary ...

Nonsense, nonsense, nonsense. No, for a spotty adolescent male in the London suburbs in the mid 1970s, this was a non-stop source of sex and violence. Think back to all those wonderful sequences showing animal behaviour. What were the animals doing during these sequences?

Er ... courtship rituals, mating behaviour, territoriality, feeding ...

Exactly. Pulling, shagging and fighting. Our parents were pleased that we were watching informative documentaries on TV instead of hanging around bus shelters smoking, but the reality is that we were watching, open-jawed, non-stop orgies of sex and violence. And this is where the British Board of Wildlife Film Censors comes in. Someone has to point out to a new generation of parents just how corrupting these films can be.

Tough work, but someone's got to do it, eh Prof?

No need to be sarcastic. It needs someone of great maturity to do a job such as this. Someone who can watch two tortoises copulating without sniggering. We have to make big sacrifices for this job.

Such as?

We can only do the job if we adopt the mentality of a pubescent male. Which means that we have to drink two cans of Red Bull before we even get started so that we regress to an adolescent mindset.

... a good excuse to buy FHM and claim it as a business expense, in other words.

I'll ignore that. Then we have to watch the programme with the sound turned down.

Why is that?

Because we don't want to be distracted by the sober commentary. Let's take the prairie dog as an example: a community of randy and extremely territorial mammals living in a confined space. Close your ears to the commentator's authoritative tones, think a little laterally and dust the resulting concoction with a Geordie accent. What do you have?

I shudder to think.

'Day fourteen in the Big Brother warren and the alpha male is inspecting the anal glands of a fit female'

So you are arguing that wildlife documentaries are just one more branch of Reality TV?

And why not? They sit in similar slots in the primetime evening TV schedules. The only difference is that the middle classes think that wildlife documentaries are educational whilst Reality TV is for chavs. The truth is that watching the courtship rituals of prairie dogs brings out the inner chav in all of us.

And how far could this go?

Some say that *I'm a Celebrity, Get Me Out of Here* illustrates survival of the fittest very well. And because Darwin envisaged survival of the fittest as an illustration of within-species competition, we don't even need to change the format. Just up the ante by a few notches and we can get rid of a few C-list celebs each year. Which can't be bad, can it?

If you say so, Prof. Flawless logic as ever. Thanks for your time.

Swiss Green Roofs Tours 4-5th May & 31st May-1st June 2006

Green roofs are going to become an important technology in the UK. While currently there is little understanding of the technology in the UK, the need to mitigate for biodiversity through the use of green roofs is an ever increasing issue, particularly in London.

These tours offer the opportunity for ecology professionals to visit a series of seminal projects in a country recognised as a world leader, providing hands on learning and experience of green roofs designed for biodiversity from lizard habitats to rare orchids.



Sihpost Platforms - Zurich Railway Station

For 2 years Livingroofs.org has successfully been running green roof tours to Switzerland in association with the Hochschule Wädenswil. Each tour includes a hotel stay high in the Alps in Central Switzerland. Livingroofs.org are proud to announce limited availability on our tours for 2006.

**Full details and application form available at
<http://www.livingroofs.org>**



LEARNING & LEISURE

Parks & Countryside – West Yorkshire Ecology

**Post 1 - County Ecologist and Records Manager -
£25,437 - £27,411 – Ref:2308**

**Post 2 – Temporary Ecological Records Officer for up to 12 months –
£15,675 - £17,469 Ref: 2311**



West Yorkshire Ecology (WYE) is the ecological records and information service for West Yorkshire and provides advice on nature conservation, biodiversity and other ecological matters. Due to recent promotions, West Yorkshire Ecology has immediate vacancies for a County Ecologist & Records Centre Manager and an Ecological Records Officer to manage West Yorkshire Ecology. The posts are supported by the five West Yorkshire district authorities and are currently based within Leeds City Council, but could be re-located in any of the other five authorities.

The County Ecologist & Records Centre Manager will be responsible for managing the Ecological Records Officer and overseeing the management of the ecological records system and provision of ecological data. Ideally you will have a degree in an ecological or an environmental related field, a post graduate qualification, together with full membership of the IEEM and at least 5 years' relevant work experience. You must be familiar with Geographic Information Systems and able to manipulate complex data.

The Ecological Records Officer will be responsible for field survey work and overseeing the management of the ecological records system and provision of ecological data. Ideally you will have a degree in an ecological or environmental related field. Applicants should have at least 3 years' relevant work experience. You must be familiar with Geographic Information Systems and able to manipulate complex data.

For an informal discussion please contact Joanne Smyth on 0113 2375275.

**Application packs can be downloaded at www.leeds.gov.uk/vacancysearch
Email: HR.working@leeds.gov.uk**

Alternatively, packs can be obtained from Leeds City Council, Civic Hall, Leeds, LS1 1UR. Or telephone 0113 (22) 43357, Fax: 0113 (39) 50719.

Closing date: 5.00 pm 13th April 2006

**“WORKING TOWARDS EQUALITY OF OPPORTUNITY”
The City Council has a No Smoking Policy
FULL-TIME POST(S) SUITABLE FOR JOB SHARING**

Institute News

Who's who in IEEM - 2006

In previous years at about this time, I have listed the names and contact e-mails of members of Council and the various IEEM Committees. If you wish to raise an issue with a Council or Committee member, you will be most welcome to do so.

The Council members and office bearers are as follows:

President

Dr Chris Spray MA, PhD, MBE, CEnv, MIEEM
Director of Environmental Science, Scottish Environment Protection Agency
chris.spray@sepa.org.uk

Vice-President

Dr Eirene Williams BA, PhD, CEnv, MIEEM
Lecturer (Retired)
EireneNDW@aol.com

Secretary

Dr Janet Swan BSc, PhD, CEnv, MIEEM
Director, RSK ENSR Environment Ltd
jswan@rskensr.com

Treasurer

Dr Alex Tait BA, DPhil, CEnv, MIBiol, MIEEM
County Ecologist, East Sussex County Council
alex.tait@eastsussexcc.gov.uk

President Elect

Dr Andy Tasker BSc, DPhil, CEnv, MIEEM
Chief Executive, Warwickshire Wildlife Trust
andy.tasker@wkwf.org.uk

List of Council Members

Mr Michael Barker	Associate Director, Entec UK barkm@entecuk.co.uk
Mr Colin Buttery	Director of Parks and Deputy Chief Executive, The Royal Parks cbuttery@royalparks.gsi.gov.uk
Dr Nick Carter	Director of Development, British Trust for Ornithology nick.carter@bto.org
Ms Karen Colebourn	Environmental Consultant karencolebourn@yahoo.co.uk
Mr Richard Graves	Technical Director, Faber Maunsell richard.graves@fabermaunsell.com
Dr Richard Jefferson	Grassland Ecologist, English Nature richard.jefferson@english-nature.org.uk
Mr Tom Keatley	Ecologist, DEFRA tom.keatley@defra.gsi.gov.uk
Mrs Jenny Neff	Director and Principal Ecologist, Ecological Advisory and Consultancy Services (EAC) info@eacs.iol.ie
Ms Pam Nolan	National Ecology Manager, Environment Agency pam.nolan@environment-agency.gov.uk
Mr Steve Pullan	Countryside Steward Advisor, DEFRA steve.pullan@defra.gsi.gov.uk
Dr John Rose University	Senior Lecturer, Sheffield Hallam j.c.rose@shu.ac.uk

Current Committee Members

Finance and General Purposes Committee

Dr Chris Spray (Chair)	chris.spray@sepa.org.uk
Mrs Jenny Neff	eacs@eircom.net
Dr Janet Swan	jswan@rskensr.com
Dr Alex Tait	alex.tait@eastsussexcc.gov.uk
Dr Andy Tasker	andy@globe.org.uk
Dr Eirene Williams	EireneNDW@aol.com

External Affairs Committee

Mr Michael Barker (Chair)	barkm@entecuk.co.uk
Ms Debbie Bartlett	debbiebartlett@compuserve.com
Dr John Box	john.box@atkingglobal.com
Dr Jon Capel	jon.capel2@hullcc.gov.uk
Ms Elizabeth Charter	liz.charter@daff.gov.im
Mrs Nicola French	nicola_french@yahoo.co.uk
Mr Robert Frith	robrfrith@ecologyuk.co.uk
Mr James Gillespie	j.gillespie@bsg-ecology.com
Mr Paul Goriup	paul.goriup@fieldfare.biz
Mr Daniel Gotts	daniel.gotts@scotland.gsi.gov.uk
Ms Jenny Heap	jheap@sunrise.ch
Mrs Elizabeth Johns	elizabeth.johns@npaconsult.co.uk
Mr Barry Johnson	barry.johnson@jarvis-uk.com
Dr Lawrence Jones-Walters	lawrence.j-w@english-nature.org.uk
Dr Robert Rowlands	robertr@edp-uk.co.uk
Dr Stephanie Wray	swray@cresswell-associates.com

Membership Admissions Committee

Dr Matthew Clarke	matt@epr.uk.com
Mrs Heliose Collier	heloise.collier@uku.co.uk
Mr David Collins	david.r.collins@defra.gsi.gov.uk
Ms Claire Cornish	clairecornish@hotmail.com
Mr Toby Gibbs	gibbt@entecuk.co.uk
Mr Richard Graves (Chair)	richard.graves@fabermaunsell.com
Dr David J. Hill	d.j.hill@bris.ac.uk
Mr Julian Jones	julian@radnorshirerwildlifetrust.org.uk
Ms Geraldine McGowan	mg@northeacol.co.uk
Dr Albert Nottage	asn@hrwallingford.co.uk
Mr Steven Pullan	steve.pullan@defra.gsi.gov.uk
Dr Pat Rae	raep@halcrow.com
Miss Sacha Rogers	sacha.rogers@pennyanderson.com
Mr Paul Rooney	rooneyp@hope.ac.uk
Mrs Claire Wansbury	claire.wansbury@atkingglobal.com
Mrs Fiona Wren	fiona.wren@environment-agency.gov.uk

Professional Affairs Committee

Dr Tim Bines	parnassia@onetel.net.uk
Ms Jacqui Green	jgreen@greenecology.co.uk
Mr Michael Hall	mick.hall@arup.com
Mr Thomas Keatley	tom.keatley@defra.gsi.gov.uk
Dr Martyn Kelly	MGKelly@bow-con.fsnet.co.uk
Ms Hilary Ludlow	hilary@landscapescienceconsultancy.co.uk
Dr Peter Shepherd	p.shepherd@bsg-ecology.com
Dr Susan Swales	sue.swales@shropshire-cc.gov.uk
Dr Eirene Williams (Chair)	EireneNDW@aol.com

Training Education and Career Development Committee

Ms Elizabeth Biron	liz.biron@somerc.com
Mr Simon Davey	srdaye@globalnet.co.uk
Ms Leila Griffiths	leila.griffiths@interoutejv.co.uk
Ms Pamela Nolan	pam.nolan@environment-agency.gov.uk
Mr Peter Phillipson	peter@telltale.co.uk
Dr Elizabeth Price	e.price@mmu.ac.uk
Dr John Rose (Chair)	j.c.rose@shu.ac.uk
Dr Fred Slater	slaterfm@cf.ac.uk
Dr Kathryn Velander	k.velander@napier.ac.uk
Miss Claire Vetori	claire.vetori@cascadeconsulting.co.uk
Dr Mark Webb	mark.webb@pennyanderson.com
Mr Mark Woods	m.woods@bsg-ecology.com

Geographic Section Committees

Scottish Section Committee

Mr Phil Baarda	phil.baarda@highlandbirchwoods.co.uk
Ms Julie Dewar	mail@juliedewar.com
Mr Daniel Gotts (Convenor)	daniel.gotts@scotland.gsi.gov.uk
Dr Rachel Hirst	hirst_r@glasgow.landuse.co.uk
Ms Geraldine McGowan	gw@northecol.co.uk
Miss Sally Monks	sally.monks@erm.com
Dr Crona O'Shea	Crona.O'Shea@perth.uhi.ac.uk
Dr Annie Say	annie.say@naturalcapital.co.uk
Miss Christine Welsh	christine.welsh@snh.gov.uk
Ms Karen Wright (Secretary)	karen.wright@snh.gov.uk

North East Section Committee

Mr Ian Bond	ian.bond@stockton.gov.uk
Dr Andrew Cherrill (Convenor*)	andrew.cherrill@sunderland.ac.uk
Ms Fiona Corby	Fiona.Corby@defra.gsi.gov.uk
Mr David Feige (Secretary)	DFeige@northumberland.gov.uk
Miss Caroline Gettinby	gettcc@entecuk.co.uk
Maria Hardy	maria.hardy@environment-agency.gov.uk
Mr Steven Pullan	steve.pullan@defra.gsi.gov.uk
Dr Jane Young	youngnature@ecologist.co.uk

(*For the interim future please contact Mr Steven Pullan for matters regarding the NE Section.)

Shadow Section in the North West

Mr Paul Rooney (Convenor) rooney.p@hope.ac.uk

Shadow Section in Ireland

Paul Scott (Convenor) paul.scott@rassociates.net
 Mieke Muyliaert (Secretary) mieke@eircom.net

Shadow Section in the South West

Mr Matt Jones (Convenor) mattj@eadconsult.co.uk

Professional Development Programme

The Professional Development Programme seems to be proving highly popular this year with quite a number of courses already filled. This really is a case of booking early to avoid disappointment. These courses are an ideal way (but not the only way) of meeting some of the CPD requirements of the Institute.

IEEM and the Training Education and Careers Committee would like to record their gratitude to the many supervisors of the courses who have been involved in the programmes for this year and last year. Last year nearly 700 people took part in the courses so it is really a significant feature of IEEM.

Continuing Professional Development

There does now seem to be more acceptance of the need for CPD but there is still some way to go. This does not reflect well on professionalism where the assumption is that members will be making efforts to keep their skills up to date. Anyway it would be peevish not to welcome the improvement. Those who have not yet responded may find that this is identified in the 10% test sample, which will be carried out shortly.

IEEM Website

The IEEM website continues to develop and there is now much on the members section. For those members who have not done so this part is well worth a visit. A number of members have enquired recently as to how access is obtained and for those still unsure, please contact Jason Reeves for the necessary information – jasonreeves@ieem.net

Membership Renewals

The process is once again over and again there was a very high rate of renewals. The many members who required two reminders and finally an email or phone call really ought to reflect on whether this exercise should be necessary and what it means for IEEM resources.

Please note that paying by Direct Debit is slightly cheaper and if you wish to pay by this means you can download the form from the members' section on the website but we have to have the details from you in good time so do take time to sort it out now.

New Members

The Membership Admissions Committee welcomes the support of existing members in sponsoring applicants. However, could you please check that your applicant is applying for the appropriate level of membership. See the eligibility criteria on the IEEM website

Consultations Update

EAC have responded to several consultations so far this year, namely:

- Halting the Loss of Biodiversity by 2010 – and Beyond;
- Strategic Environmental Assessment in Scotland;
- Centre for Ecology and Hydrology Restructuring; and
- Controlling the Spread of Bovine Tuberculosis in Cattle in High Incidence Areas in England: Badger Culling.

Spreading the Word

IEEM members will be interested to know that IEEM now has a selection of PowerPoint Presentations available for use when giving presentations about the Institute. These are targeted presentations for:

- Statutory Agencies;
- NGOs;
- Local Authorities;
- Consultancies;
- Industry;
- Teaching and Research;
- Students.

Also available is an updated leaflet providing a short introduction about the Institute. These leaflets compliment the presentations and will be useful for members should they want promotional information easily to hand.

For a copy of the Promotional CD or some information leaflets please contact Jason Reeves at the IEEM office.

Code of Professional Conduct and Disciplinary Regulations

IEEM has a Code of Conduct by which all members have agreed to abide. Just occasionally the office receives reports of work by members which would appear to be unsatisfactory and which warrant further investigation. Until recently there has not been a formalised process to this. This has now been carefully worked out taking legal advice so that it is fair to the Members, the Institute and by implication, the client. The full procedures are being sent out with this *In Practice* and there is also a 'Laymans' guide which explains in less legalistic terms how the overall process works. This is work carried out by the Professional Affairs Committee with the support of the Secretariat and with legal advice and approved by Council.

It is necessary that members know and understand the procedures which will be used – the approach is not intended to be draconian but should give assurance to all concerned that where there are issues which involve the Code of Professional Conduct they will be looked at in a thoroughly professional way. Potential Disciplinary Board members will be attending a special training workshop to be run later this month under the guidance of Eirene Williams as Chairman of the Professional Affairs Committee and Edward Coulson, our legal advisor and arranged by Linda Yost, the Deputy Executive Director.

IEEM Conference Papers

The Papers for the Bournemouth Conference should be available soon. They all assembled and are currently being edited by the Vice President, Eirene Williams.

IEEM Conferences 2006

The programme for Spring Conference on the 3rd May - Transport Issues implications for Ecological Practice is now ready. The venue is The

Kensington Palace Hotel, London. It promises to be a very interesting and full day so put it in your diary now.

The Autumn Conference is booked for the 14 – 16 November in Cardiff and will be our first visit to Wales. The theme is Climate Change and specifically what its practical ecological and land management issues are and we already have offers of support from CCW. Peter Bridgewater of the Ramsar Secretariat has also agreed to give the Fellow's Lecture.

IEEM Section in Wales?

As the Autumn Conference will be held in Cardiff it gives the opportunity to consider whether members in Wales would like to have their own geographic section. In recent years the annual conference has been an opportunity to launch a new section. But this will only work if there is sufficient interest and enthusiasm within a particular area to make this happen. We currently have sections in Scotland, the North East, the North West, Ireland and most recently the Southwest. We will shortly be circulating all members in Wales to assess the level of interest. So members in Wales – would you like to have a new your own Welsh Section?

Bird Flu – What to do?

So far there are no outbreaks of avian flu in the UK but it may only be a matter of time. In view of its recent discovery in France, if you have not already done so and you are involved in field work it would be a good idea for you and your staff to increase your level of awareness and take some preparatory measures.

The following link to the Defra website gives updated guidelines on the reporting and handling of dead wild birds: <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/pdf/ai-wildbirds-surveillance.pdf>

If you manage staff please make sure that they all have copies of these guidelines and understand them. If you work for others you should let your line managers know immediately if you observe any suspicious wild bird mortality.

It is also suggested that you obtain a stock of disposable gloves (not latex), resealable bags and disinfectant and make sure that appropriate quantities of each are available. However, you should not handle dead wild birds unless requested to do so by Defra or you consider the corpses to be a hazard to the public or wildlife. Carrying out and recording a Risk Assessment would also be a good idea.

You should also alert other people you know who you think might come across dead wild birds to the Defra guidelines and suggest that they visit the general Defra website on avian influenza at: <http://www.defra.gov.uk/animalh/diseases/notifiable/disease/ai/index.htm>

Staff Changes

Following interviews just before Christmas, I am very pleased to report that Jason Reeves was appointed as External Relations Officer. Some of you will have met him at the Bournemouth Conference. Jason's work covers responding to consultations, marketing of the Institute, raising our profile, links with other organizations, some of the work on the website and being Assistant Editor for *In Practice*. He started with IEEM as a temporary Administrative Assistant following completion of his degree in Biological Sciences at Reading University.

News of Members

IEEM now has two more visiting professors counted in its membership. These are Penny Anderson – Visiting Professor at Liverpool University and David Hill – now also Chief Scientific Advisor for RPS – Visiting Professor at Oxford Brookes University - congratulations!

President-Elect Visit to Winchester



President-Elect Andy Tasker recently visited the Winchester office

Andy Tasker, the President-Elect, visited the Winchester office to bring himself up to speed with the inner workings of the IEEM secretariat before he begins his two year tenure as President later in the year.

Guidelines for Ecological Impact Assessment (EclA) in the United Kingdom...final stage

The EclA Guidelines took a big step forward on 28 February 2006 at a meeting between the EclA Steering Group, statutory agencies and NGO's. Dr Chris Spray wearing two hats (President of IEEM and Director of Environmental Science, Scottish Environment Protection Agency) chaired a very successful meeting, which dealt with all outstanding issues and concerns.

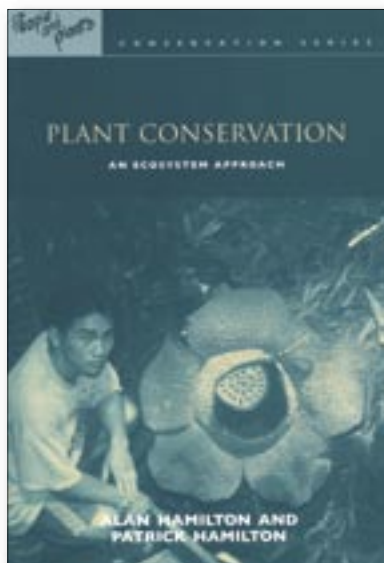
IEEM are very pleased to have gained endorsement for the EclA Guidelines from the Countryside Council for Wales, English Nature, the Environment Agency, the Environment and Heritage Service Northern Ireland, the Scottish Environment Protection Agency and Scottish Natural Heritage. In addition IEEM also gained endorsement from the Association of Local Government Ecologists, the Institute of Environmental Management and Assessment and The Wildlife Trusts. Subject to some final, minor amendments the Guidelines will be available at the beginning of May.

Thanks are due to Karen Colebourn and other members of the working group for their unstinting hard work and to Linda Yost who has helped to bring this really significant project to a conclusion.



Jason Reeves, the new ERO, and the Great Wall of China

Recent Publications

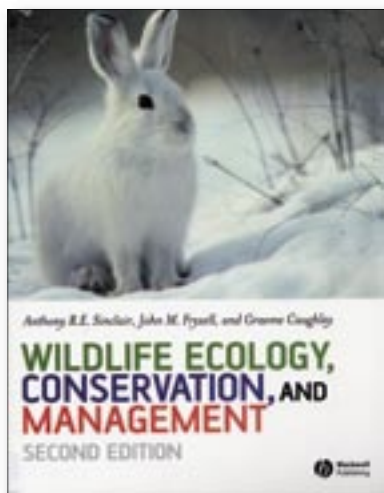
**Plant Conservation – An Ecosystem Approach**

Authors: Alan Hamilton and Patrick Hamilton
ISBN-10: 1-84407-083-2
ISBN-13: 978-1-84407-083-1
Available from: The Earthscan Institute at www.earthscan.co.uk
Price: £22.46

This is the latest Earthscan book from the People and Plants series and has been put together with the help of WWF, UNESCO and the Royal Botanic Gardens, Kew. The book takes into account the livelihood and development of people and how the conservation of plant diversity must be in conjunction with the use of plant

biodiversity for human benefit. A central theme of the book is the involvement of local people and tribes in the conservation of plant diversity. Other themes of the book are the identification of priority plant species and localities for conservation projects, the trade in wild plants, and the contributions that are made by taxonomists, ecologists and sociologists.

Professor Sir Ghilleen T. Prance, FRS, Former Director of Kew, had this to say of the publication: 'Plant conservationists, whether amateur or professional, will want to own and use [this book]. It will certainly be on the reading list for the course I teach on biodiversity assessment.'

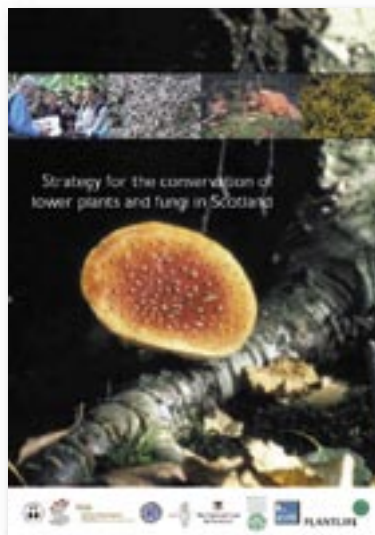
**Wildlife Ecology, Conservation and Management (Second Edition)**

Authors: Anthony R.E. Sinclair, John M. Fryxell and Graeme Coughley
ISBN-10: 1-4051-0737-5
ISBN-13: 978-1-4051-0737-2
Available from: Blackwell's Publishing at www.blackwellpublishing.com
Price: £32.50

The second edition of Wildlife Ecology, Conservation and Management gives the reader a broad and in depth introduction to general ecological principles

and also looks at how these principles can be applied to wildlife conservation and management.

Benefits of the new edition include; new chapters on understanding ecosystems and the use of computer models in wildlife management, a comprehensive and up-to-date overview of ecology including the latest theories on population dynamics and conservation, reviews of practical applications and techniques and how these can be used to formulate realistic objectives within an ecological framework, examples of real-life management situations from around the world which provide a broad perspective on the international problems of conservation, and worked examples on the enclosed CD enable students to practice calculations explained in the text.

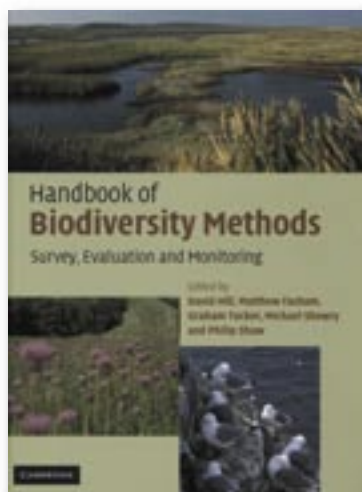
**Strategy for the Conservation of Lower Plants and Fungi in Scotland**

Authors: Deborah Long and Stephen Ward
ISBN-10: 1-904749-17-8
Available from: deborah.long@plantlife.org.uk at Plantlife Link Scotland (PLINKS)

As a result of the Rio Earth Summit in 1992, and the resulting Convention on Biological Diversity (CBD) the UK Biodiversity Action Plan (UKBAP) began in 1994. As part of the UKBAP the UK adopted the 'Global Strategy for Plant Conservation' (GSPC) in

2001. The UK responded to the GSPC with the publication of 'Plant Diversity Challenge: The UK's Response to the Global Strategy for Plant Conservation' and this strategy was used as a basic structure for the strategy reviewed here.

The strategy is designed to cover six years and is to be reviewed regularly. It has five objectives, namely: Understanding and Documenting Plant Diversity, Conserving Plant Diversity, Using Plant Diversity Sustainably, Promoting Education and Awareness, and Building Capacity for the Conservation of Plant Diversity. Within each objective are actions for the strategy. Each action is graded as current, short or medium depending on the time period involved and in combination these will help with the progress of lower plant and fungi conservation in Scotland. This will help meet the targets of the Scottish Biodiversity Strategy, the UK Biodiversity Action Plan and the 2010 target of the EU Sustainable Development Strategy.

**Handbook of Biodiversity Methods – Survey, Evaluation and Monitoring**

Editors: David Hill, Matthew Fasham, Graham Tucker, Michael Shewry and Philip Shaw
ISBN-10: 0-521-82368-4
ISBN-13: 978-0521-82368-5
Available from: Cambridge University Press at www.cambridge.org
Price: £85.00

The significance of biodiversity is recognised globally and as such great importance has been placed on it within politics and protective legislation. This handbook provides guidance and procedures and is a valuable reference for anyone involved in the many biodiversity audits that have resulted from this. The handbook is divided into three parts, which are well set out and easy to read with numerous useful diagrams and tables. The first section of the book deals with planning, including method selection, experimental design, sampling strategy, and data analysis and evaluation. The second part concerns survey, evaluation and monitoring methods for a varied range of habitats. Lastly, the third part of the handbook looks at species and gives information on general and specific methods of survey and monitoring for the main taxonomic groups. The authors and editors of this handbook are all experienced field ecologists and highly respected authorities on the subjects covered here.

In the Journals

Compiled by Jim Thompson,
Nick Jackson and Jason Reeves



D. King.

Climate change: the science and the policy THIRTEENTH BES LECTURE

Journal of Applied Ecology 2005, **42**:779-783.

This paper by being read in its entirety would be an excellent way of accumulating those CPD points. The author is no less than Sir David King, Chief Scientific Adviser and Head of the Office of Science and Technology so what better way to view the interface between science and the government on this vital issue. The written version is short but not on the facts necessary to underline the gravity of the current situation. It has five sections: climate change science, impacts, extreme events, biodiversity, adaptation and mitigation conclusions. He points out that globally we face serious challenges from the effects of climate change. The causal link between global warming and increased greenhouse gas emissions is well established. Carbon dioxide levels are at a higher level than at any time in the past 750,000 years at least, and it is too late to stop further warming and consequent impacts on UK and global societies. The paper summarizes the latest scientific evidence for anthropogenic global warming and outlines strategies for adapting to its impacts and mitigating the effects in the longer term. It finishes with the statement: 'Action is affordable: inaction is certainly not'.

Correspondence: Sir David King ScD FRS, Chief Scientific Adviser and Head of the Office of Science and Technology, 1 Victoria Street, London SW1 0ET, UK.



Greenland glacier

P.E. Hulme.

Adapting to climate change: is there scope for ecological management in the face of a global threat?

Journal of Applied Ecology 2005, **42**: 784 –794.

This paper again is really essential reading for those who want to come to terms with this most important of environmental issues. The paper itself is broken down into several sections: introduction, adaptation to what, where and when?, an uncertain future: positive and negative feedbacks on species' responses, assessing future risks: modeling species' responses to climate change and responding to future climate change: what are the options?

It notes the lack of practical strategies for adapting to climate change. Adaptation strategies should aim to increase the flexibility in management of vulnerable ecosystems, enhance the inherent adaptability of species and ecosystem processes, and reduce trends in environmental and social pressures that increase vulnerability to climate variability.

Climate change may well have effects other than temperature and changes in precipitation, relative humidity, radiation, wind speed and/or potential evapotranspiration are cited and may be more marked than for temperature. The role of models is stressed and these should go beyond predicting spatial and temporal abundance and incorporate aspects of life history, intra- and interspecific competition and predation.

The paper points out that climate impacts are often exacerbated by current management practices, such as the construction of sea defences, flood management and fire exclusion. Approaches geared to safeguard economic interests may run contrary to options for biodiversity conservation. Increased environmental variability implies lower sustainable harvest rates and increased risks of population collapse. Climate change may significantly reduce habitat suitability and may threaten species with limited dispersal ability. Well-planned species translocations are suggested as a better option than management attempts to increase landscape connectivity. This concept is being championed particularly by the Dutch and is generating considerable interest as to the extent of its application in the UK and again is expected to feature at the conference this autumn.

Correspondence: e-mail pehu@ceh.ac.uk

M. Wolters, J.P. Bakker, M.D. Bertness, R.L. Jefferies and I. Moller.

Saltmarsh erosion and restoration in south-east England: squeezing the evidence requires realignment.

Journal of Applied Ecology 2005, **42**: 844-851.

This is a further paper sparked off by the suggestion that ragworms had a negative impact on the re-establishment of salt marshes following coastal re-alignment. Saltmarshes in south-east England have been eroding rapidly since 1960. There are three contentious issues: (i) saltmarsh erosion is the result of coastal squeeze, where sea walls prevent a landward migration of a saltmarsh in response to sea level rise; (ii) saltmarsh erosion is linked to bioturbation and herbivory of seedlings by the ragworm *Nereis diversicolor*; (iii) new saltmarshes will not develop on managed realignment sites where existing sea walls have been removed because of the effects of ragworms.

The paper provides a literature review of physical and biological processes relevant to the above three issues, and discusses the relative importance of these processes at different spatial and temporal scales.

The paper demonstrates that, at a regional scale, the combination of strong winds, high tides and increased wave height appears to be responsible for the increased rate of marsh erosion and creek dissection recorded in the 1970s. There is also some laboratory evidence that bioturbation and herbivory from populations of *Nereis* can lead to sediment instability and loss of pioneer plant species, such as *Salicornia* spp.

At a large number of different managed realignment sites there is strong evidence that even if bioturbation and herbivory by *Nereis* have occurred, overall the effects have been insufficient to restrict plant succession of exposed sediment.

Correspondence: e-mail mwo@ceh.ac.uk



Saltmarsh, Lymington - Keyhaven

D. Goulson, L.C. Derwent, M.E. Hanley, D.W. Dunn and S.R. Abolins.

Predicting calyptrate fly populations from the weather, and probable consequences of climate change.

Journal of Applied Ecology 2005, **42**: 795-804.

Calyptrate flies include numerous species that are disease vectors and have a high nuisance value, notably *Musca domestica*. Populations are often associated with livestock farms and domestic waste disposal facilities such as landfill.

The relationship between fly numbers and weather conditions was examined using a 4-year data set of weekly fly catches from six sites in southern UK, together with meteorological data.

Predictions based only on humidity, temperature and rainfall were strongly correlated with observed data, suggesting that fly population changes are largely driven by the weather rather than by biotic factors. We can forecast fly populations so that control measures need only be deployed when weather conditions are suitable for a fly outbreak, reducing the need for prophylactic insecticide use.

The effects of climate change were simulated using predictions of future temperature increases and the models predicted substantial increases in fly populations up to 244% by 2080 compared with current levels, with the greatest increases occurring in the summer months. If this occurs considerable increases in the incidence of fly-borne disease may be expected.

Correspondence: e-mail dg3@soton.ac.uk

N. Ratcliffe, S. Schmitt and M. Whiffin.

Sink or swim? Viability of a black-tailed godwit population in relation to flooding .

Journal of Applied Ecology 2005, **42**: 834-843.

Black-tailed godwits have declined throughout northern Europe because of changing agricultural practices. The UK population is now mostly confined to two reserves within flood-defence structures, and numbers have declined at one of these. This study diagnosed the cause of this decline and evaluated options for remedial management.

Re-nesting models showed that productivity varied among sites and years in relation to flooding patterns. Floods caused breeding failure by forcing godwits to nest on nearby arable fields where nest and chick survival rates were low. The relative merits of various options for mitigating the effect of floods on godwits were investigated using a combination of hydrological, re-nesting and population models.

Provision of compensatory habitat is likely to be a much cheaper means of conserving black-tailed godwits at the Ouse Washes than flood mitigation. However, reliance on the creation of new habitat is a more risky strategy as the godwits may continue to use traditional arable fields in favour of grassland alternatives, and because their productivity on created grassland is unknown.

Correspondence: e-mail norman.ratcliffe@rspb.org.uk

I. Roschewitz, D. Gabriel, T. Tschardt and C. Thies.

The effects of landscape complexity on arable weed species diversity in organic and conventional farming.

Journal of Applied Ecology 2005, **42**: 873-882.

There is growing concern about declining species diversity in agro-ecosystems caused by agricultural intensification at the field and landscape scales. Species diversity of arable weeds is classically related to local abiotic factors and resource conditions. It is believed to be enhanced by organic farming but the surrounding landscape may also be important.

This study assessed the ruderal vegetation, seed bank and seed rain in 24 winter wheat fields to examine the relative importance of organic vs. conventional farming and landscape complexity for weed species diversity.

Weed species diversity in the vegetation, seed rain and seed bank was higher in organic than in conventional fields. Increasing landscape complexity enhanced species diversity more strongly in the vegetation of conventional than organic fields, to the extent that diversity was similar in both farming systems when the landscape was complex. Species diversity of the seed bank was increased by landscape complexity irrespective of farming system.

Agri-environment schemes designed to preserve and enhance biodiversity should not only consider the management of single fields but also of the surrounding landscape.

Correspondence: e-mail indra.roschewitz@agr.uni-goettingen.de

N.K. Dulvy, S. Jennings, N.B. Goodwin, A. Grant and J.D. Reynolds.

Comparison of threat and exploitation status in North-East Atlantic marine populations.

Journal of Applied Ecology 2005, **42**: 883-891.

Threat listing of exploited marine species has been controversial because of the scientific uncertainty of extinction risk as well as the social, economic and political costs of management procedures that may be triggered by designation of species as threatened.

The authors applied three sets of threat criteria to 76 stocks (populations) of 21 exploited marine fish and invertebrate species (such as Atlantic cod, southern bluefin tuna and Atlantic halibut). Two criteria sets were based on decline rates: World Conservation Union (IUCN A1) and the American Fisheries Society (AFS). The third set of criteria, based on population viability (IUCN E), was assessed using non-parametric simulation and two diffusion approximation methods.

The authors compared extinction risk outcomes (threatened or not) against the exploitation status of each stock (inside or outside safe biological limits). For each combination of threat and exploitation the authors assessed the rate of hits, misses and false alarms.

None of the threat metrics produced false alarms, where sustainably exploited stocks were categorized as threatened. The quantitative IUCN E metrics produced higher hit rates than the decline rate metrics (IUCN A1 and AFS) and all of the metrics produced similar miss rates. However, the IUCN E methods could be applied to fewer stocks (12–14) compared with IUCN A1 decline rate and AFS criteria, both of which could be applied all 76 stocks.

Threat criteria provide warnings of population collapse that are consistent with those provided in fisheries stock assessments. The results of this study suggest that scientists with different backgrounds and objectives should usually be able to agree on the stocks for which the most urgent management action is needed.

Correspondence: e-mail n.k.dulvy@cefas.co.uk

M. Diekmann, U. Bramick, R.Lemcke and T. Mehner.

Habitat-specific fishing revealed distinct indicator species in German lowland lake fish communities.

Journal of Applied Ecology 2005, **42**: 901-909.

With the implementation of the European Water Framework Directive, the need for studies on European lake fish communities has increased to include lake type-specific fish community features. Although several standardized fish sampling methodologies are available, most previous fish community studies lack a simultaneous consideration of the littoral, benthic and pelagic habitats of lakes.

To compare habitat-specific fish communities, the authors sampled 67 lakes in the north-eastern German lowlands using Norden multimesh gillnets in the benthic and pelagic habitats, and electrofishing in the littoral zone.

Standardized catches and diversity of the fish community differed among the three habitats sampled. Species richness and Shannon diversity were higher in benthic and littoral habitats compared with pelagic habitats. Overall, the benthic habitat had the most homogeneous catches and contained the most diverse fish community.

All three habitats showed distinct characteristics with respect to either species diversity or relative species' abundances.

Only simultaneous consideration of all lake habitats will fulfil the requirements of the Water Framework Directive for evaluating the ecological integrity of lakes. A pre-separation into at least two community types according to lake morphology is necessary before the deviation of the present fish community relative to a reference state can be determined.

Correspondence: e-mail markus.diekmann@lvvg.bwl.de.

S.E. Baker, S.A. Ellwood, R. Watkins and D.W. Macdonald.

Non-lethal control of wildlife: using chemical repellents as feeding deterrents for the European badger *Meles meles*.

Journal of Applied Ecology 2005, **42**: 921-931.

This paper is well worth considering in the light of the present Defra consultation on Badgers. Non-lethal methods of controlling wildlife foraging damage may offer conservation, ethical, legal and efficacy advantages over lethal control. Chemical repellents present a potential non-lethal approach, but have not been adequately researched in natural environments.

The paper reports on the relative efficacy of capsaicin, cinnamamide and ziram using remote video-surveillance to obtain detailed behavioural observations of known free-ranging individual badgers over a period of 56 nights.

For high-quality, applied environmental management research ...



Oryx

The International Journal of Conservation

- Covers conservation problems, solutions and the effectiveness of implementation.
- More research from and about developing countries than any other competing journal.
- Online ahead of print, enabling quicker access to research!

View the forthcoming articles at
www.journals.cambridge.org/jid_ORX

Environmental Practice

Journal of the National Association of Environmental Professionals

- Develops innovative solutions to environmental problems for public policy implementation, professional practice, or both.
- Links findings in science and technology with issues of public policy, health, environmental quality, law, political economy, management, and the appropriate standards for expertise.

Read the sample copy online at www.journals.cambridge.org/jid_ENP



Environmental Conservation

International Journal of Environmental Science

- Comprehensive and interdisciplinary – ranging from issues in human institutions to coastal and land management.
- Essential for environmentalists, managers, consultants, agency workers and scientists to keep abreast of current developments in environmental science.
- Impact factor increase over the last 3 years to 1.841,* ranked 27 out of 134 journals in Environmental Sciences.

*2004 Institute for Scientific Information's Journal Citation Report

Visit www.journals.cambridge.org/jid_ENC for a FREE sample issue

Register for FREE table of contents email alerts at:
www.journals.cambridge.org/register



Badgers discriminated precisely between the four treatments, demonstrating a clear preference for untreated baits, followed by cinnamamide and capsaicin and then ziram.

All untreated baits, and baits treated with capsaicin or cinnamamide, were eaten throughout the trial. Ziram baits were fully consumed on treatment nights 1 and 2. Ziram consumption then declined to zero between treatment nights 3 and 9 and remained so to the end of the trials. This study provides proof of the concept that ziram has clear potential for reducing badger feeding damage through conditioned taste aversion to an odour.

Correspondence: e-mail sandra.baker@zoo.ox.ac.uk



European Badger

P.W. Atkinson, R.J. Fuller, J.A. Vickery, G.J. Conway, J.R.B. Tallwin, R.E.N. Smith, K.A. Haysom, T.C. Ings, E.J. Asteraki and V.K. Brown.

Influence of agricultural management, sward structure and food resources on grassland field use by birds in lowland England.

Journal of Applied Ecology 2005, **42**: 932-942.

Agricultural management of grassland in lowland Britain has changed fundamentally in the last 50 years. This study investigated the mechanisms by which these changes have impacted on birds and their food supplies. The paper illustrates the complexity of the issues involved.

The authors quantified field use by birds in summer and winter in two grassland areas over three years, relating bird occurrence to the management, sward structure and seed and invertebrate food resources of individual fields.

Relationships between management intensity and abundance of soil and epigeal invertebrates were complex. Soil beetle larvae were consistently lower in abundance, and surface-active beetle larvae counts consistently higher, in intensively managed fields. Foliar invertebrates were negatively correlated with management intensity.

In winter, there was a tendency towards higher occupancy of intensively managed fields by bird species feeding on soil invertebrates. In summer many species avoided fields with tall swards.

Use of fields by birds was generally not related to seed or invertebrate food abundance but with insectivorous birds the strong negative relationships (in summer) with sward height suggested that access to food may be the critical factor.

The authors suggest that attempts to restore habitat quality for birds in grassland landscapes need to create a range of management intensities and sward structures at the field and farm scales. A greater understanding of methods to enhance prey accessibility, as well as abundance, for insectivorous birds is required.

Correspondence: e-mail phil.atkinson@bto.org

D.T. Blumstein, E. Fernandez-Juricic, P.A. Zollner and S.C. Garity.

Inter-specific variation in avian responses to human disturbance.

Journal of Applied Ecology 2005, **42**: 943-953.

Increasing urbanization and recreational activities around and within biodiversity hotspots require an understanding of how to reduce the impacts of human disturbance.

The authors reviewed the literature and found that only 21% of studies that used a behavioural approach to study human disturbance focused on multiple species rather than single species. These studies identified a number of potential predictive variables.

Using a simulation model the authors found that fitness-related responses, such as the quantity of food consumed by a species, are relatively sensitive to the distance at which animals detect humans, the frequency of disturbance by humans and the interaction of these factors, but are less sensitive to other characteristics.

They examined avian alert distance (the distance animals first orientated to an approaching threat, a proxy for detection distance) across 150 species and found that larger species had greater alert distances than smaller species. The results suggest that body size could be a potential predictor of responses to human disturbance across species, and could be used by managers to make conservation decisions regarding levels of human visitation to a protected site.

Correspondence: e-mail marmots@ucla.edu

F. Nicolè, E. Brzosko and I. Till-Bottraud.

Population viability analysis of *Cypripedium calceolus* in a protected area: longevity, stability and persistence.

Journal of Ecology 2005, **93**: 716-726.

Cypripedium calceolus L. the Lady's Slipper Orchid is a long-lived clonal orchid, which has suffered an alarming decline throughout Eurasia. The authors performed a population viability analysis on three island populations in a protected area to estimate population viability and thus to gain a better understanding of the species and its needs

All analyses indicate that the three populations have remarkably slow and stable dynamics. The system is probably stabilized by the long life span of clumps (mean longevity from 110 to 350 years). Adult dormancy had an important role in the dynamics, and adult survival and seed persistence were key factors in maintaining population stability and persistence.

A young, uniformly distributed population had fewer, shorter lived adult clumps than two older, aggregated populations. Although no perceptible change was predicted for the next 100 years, the younger population was more sensitive to environmental variations and may go extinct in the next 250-500 years, depending on longevity of the seed bank.

C. calceolus populations can persist in a protected area where there are only slow changes in habitat through secondary forest succession. The dramatic decrease in *C. calceolus* population size and area over 20 years in Eurasia suggests that many populations have experienced unfavourable habitat disturbances.

The analysis indicated the importance of habitat vs. individual conservation for the protection of *C. calceolus* populations. As this species is usually found within rich orchid communities, it should be used as an umbrella species in management plans.

Correspondence: e-mail: florence.nicole@ujf-grenoble.fr

R.L. Eckstein and T.W. Donath.

Interactions between litter and water availability affect seedling emergence in four familial pairs of floodplain species.

Journal of Ecology 2005, **93**: 807-816.

The practical implications of this paper are perhaps rather more significant than the title might suggest. The authors studied seedling emergence in four pairs of floodplain herbs in response to the experimental manipulation of soil moisture and litter cover to analyse (i) whether the effect of litter changes from negative under humid to positive under dry conditions, and (ii) whether the response to changing water and light conditions with increasing litter cover, varies among species and plant families.

They carried out a controlled pot experiment using four levels of litter cover and two levels of water-addition, leading to constantly humid substrate or intermittently dry topsoil.

Regardless of water-additions, percentage emergence reached a peak at low levels of litter cover. There was a significant litter × water-addition interaction in six species, with positive effects of litter under intermittently dry conditions and negative or neutral effects under constantly humid conditions. Litter lowered maximum temperature as well as amplitude, and alleviated soil humidity under low water supply, while imposing increasingly shaded conditions. Analysis of species- and family-specific responses suggested that germination under a heavy litter cover was significantly reduced in smaller-seeded species (i.e. those that tend to have higher light demands for germination).

The results suggest that transfer of seed-containing plant litter can aid restoration projects if applied at 0.2-0.4 kg m⁻². Below these levels, establishment of most species may be inhibited by drought, while higher amounts will increasingly suppress seedling emergence, especially of small-seeded species.

Correspondence: e-mail: lutz.eckstein@agr.uni-giessen.de

W. Tinner and P. Kaltenrieder.

Rapid responses of high-mountain vegetation to early Holocene environmental changes in the Swiss Alps.

Journal of Ecology 2005, **93**: 936-947.

Historical records such as described in this paper are often of interest in that they provide evidence of previous variations in climate, the scale of which can sometimes be surprisingly large.

The Early Holocene sediment of a lake at tree line in the Swiss Central Alps was sampled for plant macrofossils. Alpine plant communities (e.g. with *Salix herbacea*) were established at 11,600–11,500 calendar years before present (cal. year bp), when oxygen-isotope records showed that temperatures increased by c. 3–4 °C within decades. *Larix decidua* trees reached the site at c. 11,350 cal. year bp, probably in response to further warming by 1–2 °C. Forests dominated by *L. decidua* persisted until 9,600 cal. year bp, when *Pinus cembra* became more important.

The dominance of *Larix decidua* for two millennia is explained by dry summer conditions, and possibly low winter temperatures, which favoured it over the late-successional *Pinus cembra*. Environmental conditions were a result of variations in the earth's orbit, leading to a maximum of summer and a minimum of winter solar radiation.

The relative importance of *Larix decidua* decreased during periods of diminished solar radiation at 11,100, 10,100 and 9,400 cal. year bp.

The final collapse of *Larix decidua* at 8,400 cal. year bp was possibly related to abrupt climatic cooling as a consequence of a large meltwater input to the North Atlantic. Similarly, the temporary exclusion of *Pinus cembra* from tree line at 10,600–10,200 cal. year bp may be related to slowing down of thermohaline circulation at 10,700–10,300 cal. year bp.

The results show that tree line vegetation was in dynamic equilibrium with climate, even during periods of extraordinarily rapid climatic change. They also imply that forecasted global warming may trigger rapid upslope movements of the tree line of up to 800 m within a few decades or centuries at most, probably inducing large-scale displacements of plant species as well as irrecoverable biodiversity losses.

Correspondence: e-mail willy.tinner@ips.unibe.ch



Alpine tree line below the Eiger

S.E. Hartley and R.J. Mitchell.

Manipulation of nutrients and grazing levels on heather moorland: changes in *Calluna* dominance and consequences for community composition.

Journal of Ecology 2005, **93**: 990-1004.

Experimental studies of the combined effects of herbivory and the availability of nutrients on semi-natural communities remain relatively scarce. The paper reports on the effects of six years of nutrient addition (N, P and K) and protection from grazing on moorland plant communities in the Scottish uplands, particularly on the cover of the dominant *Calluna vulgaris*.

Grazing in combination with nitrogen addition caused the greatest decline in *Calluna* cover, typically 40–50%, but nitrogen addition did not cause a significant decline in *Calluna* on plots protected from grazing. More *Calluna* shoots were browsed on nitrogen-treated plots than on untreated ones, presumably because grazing animals preferred fertilized *Calluna*.

Nitrogen addition allowed grasses to increase in cover, especially on grazed plots. However, *Nardus stricta*, *Festuca ovina* and *Agrostis* sp. all declined in fenced areas but increased in grazed plots, whereas *Deschampsia flexuosa*

and *Festuca rubra* increased in fenced plots.

The effects of grazing and nutrient addition varied markedly between sites, possibly because of differences in soil moisture and organic matter.

Fencing increased the cover of grazing-intolerant plants with low nutrient demands. Plots receiving nitrogen and phosphorus had more nutrient-demanding plants able to tolerate high grazing pressure.

The impact of nitrogen addition on the cover of *Calluna* and on competing grass species in the community critically depends on the level of grazing. Changes in community composition caused by grazing and fertilizer addition can be explained in terms of the ecological tolerances of individual species, allowing predictions of the types of plants that are likely to increase or decrease in cover.

Correspondence: e-mail s.hartley@sussex.ac.uk

R. Jansson, U.Zinko, D.M. Merritt and C. Nilsson.

Hydrochory increases riparian plant species richness: a comparison between a free-flowing and a regulated river.

Journal of Ecology 2005, **93**:1094-1103.

The importance of dispersal for plant community structure is poorly understood. Previous studies have hypothesized that patterns in the distribution and genetic structure of riparian plant communities were caused by hydrochory, i.e. plant dispersal by water. The authors separated the relative contributions of propagules from hydrochory and other dispersal vectors by comparing colonization in pairs of plots, one subject to flooding and the other unflooded.

The number of colonizing individuals and the mortality rate of individuals per year did not differ significantly with flooding, but hydrochory increased the number of colonizing species per year and plot by 40–200%. The pool of colonizing species was 36–58% larger per year for flooded than for unflooded plots, indicating that hydrochory increased the diversity by facilitating long-distance dispersal. Hydrochory resulted in more diverse plant communities after three years of succession at both plot and reach scales, despite the fact that flooding caused plant mortality.

There was no evidence that dams reduce the abundance and diversity of water-dispersed propagules by acting as barriers for plant dispersal. The role of hydrochory for plant colonization was similar between a free-flowing and a regulated river.

Plant dispersal by water, as well as fluvial disturbance, is important for enhancing species richness in riparian plant communities. As flowing water may carry buoyant seeds long distances, riparian plant communities may receive a comparatively large proportion of their seeds by long-distance dispersal.

Correspondence: e-mail roland.jansson@emg.umu.se

M.B. Soons, J.H. Messelink, E. Jongejans and G.W. Heil.

Habitat fragmentation reduces grassland connectivity for both short-distance and long-distance wind-dispersed forbs.

Journal of Ecology 2005, **93**: 1214-1225.

Although habitat loss and fragmentation are assumed to threaten the regional survival of plant species, their effects on regional species dynamics via seed dispersal and colonization have rarely been quantified.

The authors assessed the impact of habitat loss and fragmentation on the connectivity, and hence regional survival, of wind-dispersed plant species of nutrient-poor semi-natural grasslands.

They quantified loss and fragmentation during the 20th century of moist, nutrient-poor semi-natural grasslands in study areas in the Netherlands, as well as their current distribution. After testing how well the habitat distribution matches species distributions of two wind-dispersed grassland forbs (*Cirsium dissectum*, representative of species with long-distance wind dispersal, and *Succisa pratensis*, representative of species with short-distance wind dispersal), they combined the habitat distribution data with simulated seed dispersal kernels in order to quantify the impact on connectivity.

Habitat loss and fragmentation has dramatically reduced both the area (by 99.8%) and the connectivity of the grasslands. The remaining grasslands are practically isolated for seeds dispersed by wind, even for species with high wind dispersal ability (for which, interestingly, connectivity by wind dispersal decreased most). Linear landscape elements hardly contribute to connectivity by wind dispersal. Regional survival of the studied species has become completely dependent on the survival of a few large populations in nature reserves. Other remaining populations are decreasing in number and size

and have low colonization capacity.

Habitat loss and fragmentation have drastically changed the regional species dynamics of wind-dispersed plant species, indicating that it is of utmost importance to preserve remaining populations in nature reserves and that the probability of colonization of new or restored sites is very low, unless the sites are adjacent to occupied sites or dispersal is artificially assisted.

Correspondence: e-mail: m.b.soons@bio.uu.nl

D.W. Sims, E.J. Southall, G.A. Tirling and J.D. Metcalfe.

Habitat-specific normal and reverse diel vertical migration in the plankton-feeding basking shark.

Journal of Animal Ecology 2005, 74: 755–761.

Megaplanktivores such as filter-feeding sharks and baleen whales are at the apex of a short food chain (phytoplankton–zooplankton–vertebrate) and are sensitive indicators of sea-surface plankton availability. Even though they spend the majority of their time below the surface it is still not known how most of these species utilize vertical habitat and adapt to short-term changes in food availability.

A key factor likely to control vertical habitat selection by planktivorous sharks is the diel vertical migration (DVM) of zooplankton and the authors were able to show that DVM patterns of the basking shark *Cetorhinus maximus* reflect habitat type and zooplankton behaviour.

In deep, well-stratified waters sharks exhibited normal DVM (dusk ascent–dawn descent) by tracking migrating sound-scattering layers characterized by *Calanus* and euphausiids. Sharks occupying shallow, inner-shelf areas near thermal fronts conducted reverse DVM (dusk descent–dawn ascent) possibly due to zooplankton predator–prey interactions that resulted in reverse DVM of *Calanus*.

These opposite DVM patterns resulted in the probability of daytime-surface sighting differing between these habitats by as much as two orders of magnitude. Ship-borne surveys undertaken at the same time as trackings reflected these behavioural differences.

The tendency of basking sharks to feed or rest for long periods at the surface has made them vulnerable to harpoon fisheries. Ship-borne and aerial surveys also use surface occurrence to assess distribution and abundance for conservation purposes. The authors study indicates that without bias reduction for habitat-specific DVM patterns, current surveys could under- or overestimate shark abundance by at least 10-fold.

Correspondence: e-mail: dws@mba.ac.uk



Basking shark (photo by G. Parsons)

H. Sandvik, K.E. Erikstad, R.T. Barrett and N.G. Yoccoz.

The effect of climate on adult survival in five species of North Atlantic seabirds.

Journal of Animal Ecology 2005, 74: 817–831.

This study looked at the effect that climate variation has on the adult survival of long-lived sea birds. The capture-mark-resight method was used to collect data on the common guillemot *Uria aalge*, Brünnich's guillemot *Uria lomvia*, razorbill *Alca torda*, Atlantic puffin *Fratercula arctica* and black-legged kittiwake *Rissa tridactyla*.

The authors considered the effects of the North Atlantic Oscillation (NAO) index, sea surface temperatures (SST) and prey stocks on adult survival in the birds at a colony on Hornøya, off the northern coast of Norway in the

western Barents Sea over a 14-year period. They found clear evidence that climate and/or prey effects on the common guillemot, Brünnich's guillemot, razorbill, and Atlantic puffin, but not on the black-legged kittiwake.

Prey availability was important to some, but not all, the species studied with climate being a better guide for survival probability. The resulting data suggests that the birds are affected only indirectly by meteorological factors. This may be through the food chain. This is suggested because most NAO effects are delayed and that increased SSTs caused decreased survival rates.

These findings are distressing given that even small changes will have considerable effects on the survival of long-lived sea birds and that sea temperatures are predicted to rise further in the future.

Correspondence: e-mail: hanna@evol.no



Atlantic Puffins (photo by R. Bower)

R. Macleod, A.G. Gosler and W. Cresswell.

Diurnal mass gain strategies and perceived predation risk in the great tit *Parus major*.

Journal of Animal Ecology 2005, 74: 956–964.

Small birds such as the great tit go through a daily cycle of building up mass reserves in order to avoid starvation at night. Over this short diurnal period the authors looked at the trade-off between starvation risk and predation risk. It was expected that if reduced escape flight performance increased predation risk because of increased mass the birds should delay mass gain until later in the day to reduce predation risk. Over longer periods this has been shown to be the case but it was not known if this was true in the short term.

The diurnal mass gain of the birds was remotely monitored in the wild and predation risk was manipulated using model sparrowhawks. Without the increased perceived risk of predation the birds increased their mass in an approximately linear trend over the period of the day but in response to increased predation risk the birds were able to manipulate their daily mass gain strategy by delaying mass gain until later in the day as predicted by the mass-dependent predation risk theory.

This study has provided unique evidence to support the existence of mass-dependent predation risk as the birds changed their escape flight performance rather than their exposure time to predators in response to increased predation risk.

Correspondence: e-mail: r.macleod@bio.gla.ac.uk

CONFERENCES 2007

Where would you like to see the Institute hold your conferences in 2007?

What should the themes be?

Please send your ideas to Nick Jackson.
nickjackson@ieem.net



News in Brief

Take Part in the Largest Climate Change Experiment Ever Undertaken

For the past two years climateprediction.net has been forecasting the possible extent of climate change. They have now joined forces with the BBC to create the world's biggest online climate change project. Home PC users are now providing the massive computing power necessary for such a project. Participants download a simple programme (available on the BBC news website), which runs in the background using any unused processing power and can be set as a screensaver so that you can watch as your model progresses. Each personal computer then runs a unique forecast model that is sent back to climateprediction.net. All of these home PCs have a much greater combined computing power than any current supercomputer. Initial results are hoped to be available by the middle of the year. For more information please visit news.bbc.co.uk.

Forestry Commission Plans for Climate Change

The Forestry Commission and the Climate Change group of the East of England Sustainable Development Round Table have published a guide entitled '*Living with Climate Change and its Effects on Trees and Woodland in the East of England*'. The guide gives practical guidance on planning ahead for the effects of climate change and how woodlands can help reduce the effects of climate change in both rural and urban areas. The guide document '*Living with Climate Change*' is available on the Sustainable Development Round Table's website www.sustainability-east.com. Copies of the summary guidance for woodland managers are available from the Forestry Commission and on the Regional Woodland Strategy website www.woodlandforlife.net.

Gene Found to Help Plants Cope with Climate Change

Researchers at the John Innes Centre in Norwich have found that gene Ppd-H1 in barley controls the gene CO which is responsible for the activation of flowering. If summers in Britain are to get hotter and drier, crops will need to flower later to allow for a longer growing period. This new knowledge will allow for breeding of plants better suited to hotter summers. For more information please visit BBSRC website.

Bird Flu and Migratory Birds

The current spread of avian influenza H5N1 is causing fear and panic around the world. As a result of this, and to prevent any unnecessarily drastic action, a campaign has been launched by the United Nations Environment Programme (UNEP), with the associated Convention on Migratory Species (CMS) and the African Eurasian Waterbird Agreement (AEWA), to make it clear to the world that the migrations of birds and other animals are natural processes that are vital to the proper functioning of ecosystems and that the spread of H5N1 is due to human activities and should not be blamed on migratory birds. For more information please see www.cms.int/news/current_news_page.htm.

UNEP Convention on Biological Diversity 2006

Throughout 2006 the UN will be urging the world community to protect biodiversity in deserts. Almost half of all the land surface of the earth is drylands ranging from deserts, semi-arid regions, savannahs and the Mediterranean regions. 2006 is the UN International Year for Deserts and Desertification and the theme for International Biodiversity Day on 22 May is 'Protecting Biodiversity in Drylands'. World Environment Day 2006 is also themed around Deserts and Desertification with the slogan of 'Don't desert drylands' and the main international celebrations will take place in Algiers, Algeria on 5 June. For more information please visit www.unep.org and www.biodiv.org.

Drought in the South East

This summer has the potential to have the worst drought in the past 100 years and water cuts would appear to be inevitable. This winter the south east has had about 280 mm of rain – the average for this period is 380 mm. There does still, however, remain the possibility of rain during the remainder of the winter and into the spring, although temperatures this April are likely to be higher than average. Water levels in the area are so low that the situation poses a considerable danger to both the environment and our water supplies. Some fish species have already been affected by the low water levels with disruptions to spawning. For more information visit www.environment-agency.gov.uk.

Strychnine to be Banned for Mole Control

From 1 September 2006 it will no longer be legal to use strychnine hydrochloride to control mole numbers. The change is due to changes in two different EC directives (91/414/EEC controlling plant protection methods and 91/8/EC controlling biocidal products). Strychnine is no longer authorised as a plant protection product and will only be authorised as a biocidal product until 1 September. Defra and the agricultural departments of Scotland and Wales now only issue permits for the use of strychnine for biocidal purposes. It is likely that an appeal will be made against the ban but any results from this will only be seen much closer to the time. Suggested alternatives for mole control are trapping and aluminium phosphide pesticides. www.pesticides.gov.uk/approvals.asp?id=1475

Wildlife Licences in Scotland

The Scottish Executive is currently reviewing the General Licences. The present licences (SEGEN 01-23) are only valid until 30 June 2006, and may even be repealed before then. New licences can be expected later this year. www.scotland.gov.uk

Wind Farms Blamed for Eagle Deaths

Four white-tailed eagles have been found dead on isolated islands off the coast of Norway. Along with the deaths caused by the wind turbines, nearly 30 other white-tailed eagles have failed to return to their nest sites within the wind farm area. It is feared that reintroduced white-tailed eagles at similar sites in the Western Isles of Scotland, that are prime sites for wind farm development, may suffer similar problems. For more information please visit www.rspb.org.uk.

Exotic Invaders in Welsh Waters

Zebra mussels have been found in Cardiff Bay. The invasive species, endemic to the Caspian and Black Sea basins, has never before been known in Welsh waters and is capable of causing great ecological damage. It is vitally important that the mussels are not allowed to spread further. The Cardiff Harbour Authority has issued guidance and advice on containing the mussels. For more information please visit news.bbc.co.uk.

UK Greenhouse Gas Emission Figures

Emissions of the six greenhouse gases in the UK fell by 14.6% between the base year (1990 for carbon dioxide, methane and nitrous oxide, and 1995 for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride) and 2004. The UK has agreed to lower emissions of the six gases by 12.5% between 2008 and 2012. Therefore the UK is still on course to meet its Kyoto greenhouse gas emissions reduction target. These figures form part of the National Atmospheric Emissions Inventory and are available at www.defra.gov.uk/environment/statistics/whatsnew.htm.

New Discoveries in Indonesia

In December 2005 scientists from Australia, Indonesia and the United States spent nearly a month in the Foja Mountains of Indonesian New Guinea. They found a world virtually untouched by humans. The scientists found many new species including: one species of bird (a honeyeater with scarlet wattles), 20 species of frog, four butterfly species, five palm species, and a white-flowered rhododendron with a 15 cm diameter flower. Also found were the Golden-Mantled Tree Kangaroo (*Dendrolagus pulcherrimus*), never before known in Indonesia, and Western Long-beaked Echidnas that were so tame they could be picked up. For more information please visit news.bbc.co.uk.

First Ramsar Site for Guernsey

The island has received its first Ramsar designation for a 426 hectare site incorporating Lihou Island, La Claire Mare Nature Reserve, the Colin Best Nature Reserve and the intertidal area and outlying reefs and rocks. The site includes a variety of habitats and species of fauna and flora. The Lihou causeway has over 200 species of seaweed alone. For more information please visit www.defra.gov.uk/news/2006/060301a.htm.

European Landscape Convention Signed by UK

The convention, which deals with protection, development and sustainable landscape management, has been signed because of Britain's strong commitment to its natural and built environment. It is hoped that the convention will help to guide the development of policies governing Britain's landscapes. For more information please visit www.defra.gov.uk.

Prospective members of IEEM

IEEM is pleased to welcome applications for membership from the following:

If any existing member has any good reason to object to someone being admitted to the Institute, especially if this relates to compliance with the Code of Professional Conduct, they must inform the Executive Director by telephone or letter before 24th April, 2006. Any communications will be handled discreetly. The decision on admission is usually taken by the Membership Admissions Committee under delegated authority from Council but may be taken directly by Council itself.

APPLICATIONS FOR FULL MEMBERSHIP

Dr Penelope G. Angold, Mr Alan R. Beaumont, Miss Samantha J. Bennett, Mr John E. Black, Mr Edward P.J. Bradbrook, Mr Alexander P. Cruickshank, Miss Nancy Davies, Mr David J. Denman, Mrs Ursula Digby, Mrs Sally A.H. Donaldson, Ms Lisa Dowling, Mr Robert J. Dray, Ms Jenny Ford, Ms Beth Garner, Miss Laura Garrod, Dr Tom Gittings, Mr Roger Goodwillie, Mr John F. Haddow, Mr David Haslam, Dr Rachel J. Holmes, Mr Matthew Jackson, Dr Mark A. Johnston, Mr Peter Johnstone, Miss Julie A. Kerans, Mr Christopher P. Ledbury, Mr Cody Levine, Mr Rob Lucking, Mr Riwilo Masulani, Mr Daniel McAndrew, Mr Ben McCabe, Mr Adrian J.T. Meurer, Mr Fraser A. Milne, Ms Ruth Minogue, Miss Catherine E. Mowat, Dr Adrian Newton, Ms Janet E. Nuttall, Mrs Susan M. Pitcher, Mr Peter R. Quelch, Mr Kris Roberts, Dr Graham Russell, Mr Mark Satinet, Mr Robert Shand, Miss Holly Smith, Mr Darren J. Smith, Mr Duncan J. Smith, Mrs Catherine M. Stephen, Dr Brian Sutton, Mrs Ginny Swaile, Mr John S. Thompson, Mr Kevin J. Webb, Dr Christian G. Westwood, Miss Jenny Wheeldon, Mr David J. Wright

APPLICATIONS FOR ASSOCIATE MEMBERSHIP

Miss Caroline M. Adelman, Mr Colin B. Austin, Dr Celia Baiao Figueira, Mr John D. Baker, Mr Alistair R. Blackshaw, Mr Christopher D. Booler, Mr Simon Boulter, Mr Sam Bretherton, Mr James M. R. Brock, Mr Luke H. Casey, Mr Craig G. Chapman, Mr Giles Coe, Miss Clare Dinham, Miss Adele Dodgson, Miss Rebecca Dollery, Mr William A. Ford, Mr Martyn J. Gest, Miss Carlee Graham, Mr William G. Haines, Mr Daniel K. Hall, Dr Anne L. Halpin, Miss Emma L. Hankinson, Miss Lorna I. Harris, Mr David J. Hennessey, Miss Anna Hield, Miss Sarah J. Hobbs, Miss Vicky Hollands, Miss Janette Holliday, Miss Jenette Howard, Ms Katherine A. Howell, Miss Mererid Howells, Miss Gail E. Ireland, Mr Marc Jackson, Mr Steven G.W. Jackson, Miss Rebecca C. M. Johnson, Mr Rupert M. Johnson, Miss Helen L. Jones, Mr Graham Jones, Mr Jim T. Jones, Mr Christopher J. Kerfoot, Ms Stephanie Kiel, Mr Ben Kimpton, Mr Declan J. Little, Miss Nikki Loveday, Mr Brett N. Lymer, Mr Richard N. Mackay, Miss Katie J. McGregor, Mr Timothy J. McHardy, Mr Barry J. McKenna, Mr Myles H. M. Menz, Mr Paul G. Moore, Mrs Diane Morgan, Miss Kerry M. Murton, Mr Matthew Neale, Ms Joanne Nightingale, Mr Martin G. O'Connor, Mrs Clare L. O'Reilly, Mr Stuart Pankhurst, Miss Gemma Parkinson, Mr David A. Parsons, Mr Paul K. Parsons, Mr Jonathan J.D. Pedder, Miss Sarah Pendarves, Mr Christopher J. People, Mrs Amie Plummer, Mr Philip J. Pointon, Miss Delphine Pouget, Miss Hannah E. Procter, Miss Catarina S.C. Rei, Ms Hannah L. Roberts, Miss Claire A. Rogers, Miss Caroline N. Roper, Mr Philip W. Saunders, Miss Eleanor J. Seaborne, Mr Andrew Seth, Miss Claire L. Snowball, Miss Anna E. Sobota, Miss Nicola S. Standley, Mr David K. Stiles, Ms Marion H. Thomson, Miss Sarah Warriss, Miss Claudia M. Watts, Miss Alison M. Whalley

ADMISSIONS

IEEM is very pleased to welcome the following new members:

FULL MEMBERS

Dr Benjamin R. Allen, Mrs Jane C. Atkinson, Mr Tim Bagwell, Dr Louise S. Bardsley, Mr Nigel B. Baskerville, Dr Victoria J. Bennett, Mrs Vicki Bloomfield, Miss Coleen Brown, Mr Robert D. Brown, Dr Paul A. Chapman, Mr Jon Curson, Miss Karen A. Davies, Miss Katherine L. Dewey, Dr Nicholas C. Downs, Miss Caroline M. Drewett, Mr Christopher D. Dyson, Ms Wendy J. Fenton, Mr Henry E. Gallia, Ms Christine S. Hall, Mr Toby Hart, Mr Ralph N. Hobbs, Dr Mary J. Holmes, Mrs Sally G. Hope Johnson, Miss Lisa J. Huckstep, Mr Martin D. Janes, Mr Stewart J. Johnson, Ms Alison M. Jones, Mr Cory H. Jones, Mr Philip R. Kearney, Mrs Lesley Kelly, Mr Richard J. Lockett, Mrs Suzanne M. Lumsden, Mrs Margaret S. Magee, Mr Thomas A. Mallows, Ms Alison J. McKnight, Ms Gillian M. McKnight, Dr Caroline E. McParland, Dr Kathryn Meakin, Mr Mark Miller, Ms Lucy J. Monhemius, Mr Barnaby E. Parker, Ms Philippa Pickles, Miss Rachael A. Porter, Mr Daniel Ross, Mr Anthony C. Seymour, Mrs Saya Sheridan, Mr Adrian Spalding, Ms Alexandra C. Stewart, Mr Pip S.H. Tabor, Mr Paul M. Thomas, Mr Andrew J. Thorne, Miss Elizabeth R. Turley, Mr Henry J. Walker, Mr Richard J. West, Mr Ian J. Wrigley

ASSOCIATE MEMBERS

Miss Claire L. Andrews, Miss Tanya Bartlett, Miss Julia G. Bastone, Miss Mary A. Beech, Mr Angus K. Beyts, Mr David J. Bigden, Mrs Jennifer R. Bowles, Miss Elizabeth S. Brooks, Mr William A.P. Brown, Mr Julius Bullo, Miss Nadine L. Clark, Mr Rupert A. Collins, Mr Matthew H. Davies, Mr Joseph D. Deimel, Miss Chloe Delgery, Mr Seamus P. Eaves, Mr William Gaudie, Mrs Hannah G. Gray, Mr Russell E. Grey, Miss Jennie L. Harper, Mr Julian B. Hosking, Miss Morgan A. Hughes, Miss Catherine L. Jones, Dr Timothy J. King, Mr David A. King, Mr Roy S. Leigh, Mr Adam J. Lockyear, Mr Robert A. Logan, Mr Bruce Lumsden, Miss Nicola Marsland, Dr Louise McAbendroth, Miss Katherine J. McCombie, Mr Alistair J. Miller, Miss Jane E. Morris, Miss Lila Morris, Mr Mark Morris, Mr Andrew C. Murray-Wood, Mr Keith R. Neary, Miss Lucy Philpott, Mr Martin D. Pugh, Mr Michéal E. Quinlan, Mr Jason M. Reeves, Miss Naomi P. Scuffil, Mr Christopher J. Seabridge, Mr Glen Shah, Miss Harriet R. Spray, Mr Roland T. Stonex, Mr Richard Tisdall, Miss Michelle L. Waddicor, Miss Monica Wadey, Mr Daniel C. Watkins

AFFILIATE MEMBERS

Miss Stephanie K. Boocock, Miss Anna E. Bradnam, Mr Marc Dino, Mr Angus J. Duncan, Mr Ian D.M. Fraser, Mr Stephen Fry, Miss Moira Gallagher, Mr Daniel Hone, Miss Abigale Hooper, Mr Paul H. Ligas, Dr John Robertson, Mr Matthew J. York

STUDENT MEMBERS

Miss Kelly J. Clark, Mr James A. Daplyn, Mr Andrew P. Detheridge, Miss Faye M. Durkin, Miss Charlie Dwight, Miss Sarah R. Ellis, Miss Leona J. Graves, Miss Marianne Joynes, Miss Priyanka Kochhar, Mr Vijay Kolinjivadi, Mrs Georgina Magee, Miss Sophie Mairesse, Mr Lawrence Mason, Mr Martin McGrory, Miss Kathryn E. Metcalfe, Miss Sophie J. Milburn, Mr Louis Moir-Barnetson, Miss Erica J. Mortimer, Mr Toye Ogisi, Mr Steven P. Oram, Mr Jonathan Pearson, Miss Anna K. Price, Miss Tracey Smyth, Mr Steven Songhurst, Mr Ian M. Stewart, Mr Chris Taylor, Mrs Susan Thompson, Mr Andrew J. Whitelee, Mrs Julie Winterbottom, Miss Esi D. Yankah

The following have successfully upgraded their Membership from Associate to Full:

Mr Daniel Ahern, Mr Jon Allen, Miss Victoria M. Allen, Mr Barry Anderson, Dr Richard N. Birch, Mrs Rachel Chase, Mr Terence Coult, Miss Ruth E. Cove, Ms Rachel M.L. Cowan, Mrs Rupinder Dhillon-Downey, Dr Joe Franklin, Mr Andrew Gardner, Miss Celina Gio-Batta, Mr Richard J. Gotheridge, Dr Joanna M. Haigh, Miss Tessa L. Jenkins, Mr Jonathan P. Kendrew, Mrs Anne L. Law, Miss Nicola A. Lewis, Dr Peter M. McEvoy, Miss Sophie Miller, Miss Alison Nasta, Mr Daniel Neill, Mr Rhys D. Owen-Roberts, Ms Lorraine E. Parish, Mr Stewart Parsons, Mr James R.M. Patmore, Mr Lee Penrose, Dr Deborah Petterson, Miss Jennifer Preston, Mr Max Robinson, Mrs Amy Thristan, Miss Emma Toovey, Mrs Paula Wakelin, Ms Donna Warren

The Course programmes for the Centre for Alternative Technology, Field Studies Council, Losehill Hall, Plas Tan-y-Bwlch and BTCV are all now available. Each offers a wide range of courses that might be of interest to IEEM members. Information from:

Centre for Alternative Technology: Further details about each course can be obtained from Joan Randle.
Tel: 1654 705950, Fax: 01654 702782, www.cat.org.uk

Field Studies Council: For a copy of the FSC Courses brochure, contact FSC head Office, Preston Montford, Montford Bridge, Shrewsbury, Shropshire, SY4 1HW. Tel: 0845 345 4071, Fax: 01743 850 101, e-mail: enquiries@field-studiescouncil.org, www.fieldstudiescouncil.org

Losehill Hall: Details from Losehill Hall, Peak District National Park Centre, Castleton, Hope Valley, Derbyshire S33 8WB Tel: 01433 620373, Fax: 01433 620346, e-mail: training.losehill@peakdistrict-npa.gov.uk, www.losehill-training.org.uk

Plas Tan-y-Bwlch: Details from: Plas Tan-y-Bwlch, Maentwrog, Blaenau Ffestiniog, Gwynedd LL41 3YU. Tel: 01766 590324, Fax: 01766 590274, e-mail: Plastanybwloch@compuserve.com.

BTCV Courses: - practically based. Details from: BTCV Training Programmes Unit, Red House, Hill Lane, Great Barr, Birmingham B43 6LZ. Tel: 0121 358 2155, Fax: 0121 358 2194, e-mail: info@btcv.org.uk, www.btcv.org

10-11 April 2006. BES Annual Symposium: Ecological Limits to Sustainable Development. University of Edinburgh, Scotland.

Speakers have been invited to give a synthesis of their topic and to present their perspectives on opportunities, capacities and strategies for meeting present and future challenges. Professor Howard Dalton will introduce the meeting and Dr Stephen Bass will be invited to provide an overall synthesis at its conclusion. www.britishecologicalsociety.org/articles/meetings/current/

19-21 April 2006. BPS Collecting and Identifying Seaweeds. Plymouth.

The three day course is a mix of field and lab work and is designed for those interested in seaweed at all expertise levels.
fbunker@marineseen.com

21-23 April 2006. Mammal Society Easter Conference. Queen's University Belfast, Northern Ireland.

www.abdn.ac.uk/mammal/new_events.shtml

24-25 April 2006. Energy Saving Strategies in Water and Wastewater Treatment. Nottingham.

Contact Frances Eldon, Aqua Enviro, franceseldon@aquaenviro.co.uk
Tel: 01924 257891

26 April 2006. Water Resources in England and Wales: Challenges for the Next 10 Years. London.

A joint conference between the Institute of Civil Engineers and CIWEM covering the challenges to be faced in the future because of factors such as increased housing demands and climate change.
www.ciwem.org/events/WaterResources_Programme.pdf

27 April 2006. Earthwatch Institute Lecture: Petrels, Permafrost and Climate Change. Royal Geographical Society, London.

Two part lecture given by Dr Rob Thomas (Storm Petrels over Portugal) and Dr Peter Kershaw (Climate Change at Arctic's Edge). www.earthwatch.org

3 May 2006. IEEM Conference: Transport Issues – Implications for Ecological Practice. London.

5-6 May 2006. Biological Recording for the Future. Birmingham, UK.

Special conference of the National Federation for Biological Recording and the Biological Records Centre, with lectures and workshops to define future issues and priorities in biological recording in the UK.
Details from pha@ceh.ac.uk or see www.nfbr.org.uk

5-6 May 2006. Bringing Back the Beaver. Cotswold Water Park.

info@waterpark.org

9 May 2006. ZSL Scientific Meeting: Captive Breeding and Reintroduction of Native Species. London Zoo.

Free entry, begins at 5:30pm. www.zsl.org

10 May 2006. Integrated Urban Drainage (IUD). London.

Email: bob.earll@coastms.co.uk Tel: 01531 890415

16-18 May 2006. International Clean-Up Exhibition. Birmingham NEC.

An exhibition for property developers, environmental consultants, local authorities, surveyors and others involved with the regeneration of contaminated land. www.international-cleanup.com

22-24 May 2006. Air Pollution 2006. New Forest, Hampshire

The 14th international conference on modelling, monitoring and management of air pollution, organised by the Wessex Institute of Technology.
www.wessex.ac.uk/conferences/2006/air06/index.html

2-4 June 2006. The Mad* Show. Earl's Court, London

'Set to be the UK's biggest showcase for ethical, organic, fair trade and sustainable products, services and organisations.' www.themadshow.co.uk/

5 June 2006. UNEP World Environment Day – Deserts and Desertification. Algiers, Algeria.

World Environment Day, commemorated each year on 5 June, is one of the principal vehicles through which the United Nations stimulates worldwide awareness of the environment and enhances political attention and action.
www.unep.org/wed/2006/english/index.asp

5-7 June 2006. Coastal Environment 2006. Rhodes, Greece.

The 6th international conference on environmental problems in coastal regions including oil and chemical spill studies, organised by the Wessex Institute of Technology. www.wessex.ac.uk/conferences/2006/coast06/

6-8 June 2006. Conference on Natural Resources in the Tropics: Development and Commercialisation of Tropical Natural Resources. Sarawak, Malaysia.

The Conference on Natural Resources in the Tropics is designed to bring out the latest R & D findings in the utilization and management of natural resources particularly in ASEAN countries to the private sector, researchers, academicians, managers of resources, industrialists and policy makers.
www.unimas.my

8 June 2006. Water Framework Directive – Ecological Status, Monitoring and Reporting. London.

Email: bob.earll@coastms.co.uk Tel: 01531 890415

13 June 2006. ZSL Scientific Meeting: Historical Extinctions – Lessons for the Future? London Zoo.

Free entry, begins at 5:30pm. www.zsl.org

11-12 July 2006. BES/IEEM Symposium – Ecological Impact Assessment: Science and Best Practice. Bath Spa University, Bath and NE Somerset.

This symposium is aimed to complement the Guidelines for Ecological Impact Assessment that are being prepared by IEEM by focussing on raising the standards of ecological science in EIAs. www.britishecologicalsociety.org/articles/groups/conservation/bes_ieem_conf/

14-16 November 2006. IEEM Annual Conference and AGM: Climate Change. Cardiff.