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A View from Oregon

Robert Sallinger

Introduction

The Pacific Northwest Region of the United States is perhaps best known for its ancient forests and protracted battles over the protection of the northern spotted owl. During the past 30 years, however, the effort to protect biodiversity has expanded to a more subtle but no less important landscape, the urban interior. This movement has been driven by three factors. First, is the recognition that compact urban form and prevention of sprawl is essential to prevent encroachment upon our remaining wildlands. Second, is the recognition that direct access to nature is both a core element of a healthy, just and sustainable society and a necessary ingredient in ensuring that an increasingly urban generation of young people grows up with an appreciation and understanding of nature necessary to sustain a culture of conservation. This is a sentiment perhaps stated best by northwest writer Robert Michael Pyle when he asked in The Thunder Tree, *'What is the extinction of the condor to a child who has never known a wren?'*[1] Finally, there is the recognition that what we do in our urban ecosystems does matter; that the manner in which we integrate our built and natural environments has significant ramifications for water and air quality, consumption of natural resources and preservation of fish and wildlife species.

Three factors have given the Portland Metropolitan Region an advantage over other urban areas across the United States in its efforts to protect urban natural resources. In 1903, Portland brought famed park planners John Charles and Frederick Law Olmstead to design a park system for the City. The Olmsteads in their visionary 'Report to the Portland Park Board'[2] advised Portland to create a system of parks that included *'rural parks'* and *'scenic reservations'* with areas *'that afford …the quiet contemplation of natural scenery…and rougher, wilder and less artificially improved [parks].'* In a particularly prescient passage, the Olmsteads anticipated one of our most intractable current urban natural resource challenges, urban stormwater, when they wrote:

'…enormous advantages are gained by locating parks and parkways so as to take advantage of beautiful natural scenery…Marked economy… may also be effected by laying out parks, while land is cheap, so as to embrace streams that carry at times more water than can be taken care of by drain pipes…Thus, brooks or little rivers which would otherwise… be…put in large underground conduits at enormous public expense, may be…attractive parkways.'

Although Portland did not have sufficient funds to implement much of what the Olmsteads recommended, the Report did establish recognition that some areas should be maintained in a natural state, an ethic that continues today.

A second advantage came in the form of the visionary leadership demonstrated by Oregon Governor Tom McCall during the early 1970s. Concerned by the sudden proliferation of housing developments sprouting in what had recently been fertile farmland, something he derided as the *'grasping wastrels of the land,'* Governor McCall instituted Oregon's current land use planning system via passage of Senate Bill 100. Notable elements of Senate Bill 100 include the establishment of urban growth boundaries around metropolitan areas and the adoption of 19 statewide land-use planning goals addressing topics ranging from public involvement in the planning process, to farm and forestland protection, to energy conservation [3]. Notably Goal 5 which addresses natural resource conservation is commonly considered to be among the weakest of the goals in its focus on process rather than substantive outcomes [4].

Finally, the Portland Metropolitan Region has the only citizen-elected regional government in the United States. The Metropolitan Service District (Metro) has land-use planning jurisdiction over 26 cities and three counties in the Portland Metropolitan Region allowing for the establishment of baseline natural resource protection standards that local jurisdictions must then incorporate into their comprehensive plans. This sweeping authority allows for natural resource protection planning on a watershed level scale rather than based upon the vagaries of arbitrary political boundaries.

Today's Challenges

While the establishment of urban growth boundaries (UGB) did much to contain Oregon's cities, it did nothing to protect natural resources within our cities. In fact, for many the UGB represented an implicit licence to abandon altogether natural resource protection within our urban interiors. The Portland Metropolitan Region faces tremendous growth pressures (the population of the Willamette Valley in which Portland is located is expected to double by 2050). This growth pressure is further exacerbated by a shifting perception of the value of growth. Whereas Governor McCall was famous in the 1975 for coining the slogan *'Visit [Oregon], but don't stay'*, today the State promotes itself with the slogan *'Come for a week, stay forever'*.

Robert with a Tualitin bald eagle (photo by Ken Barron)

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Editorial

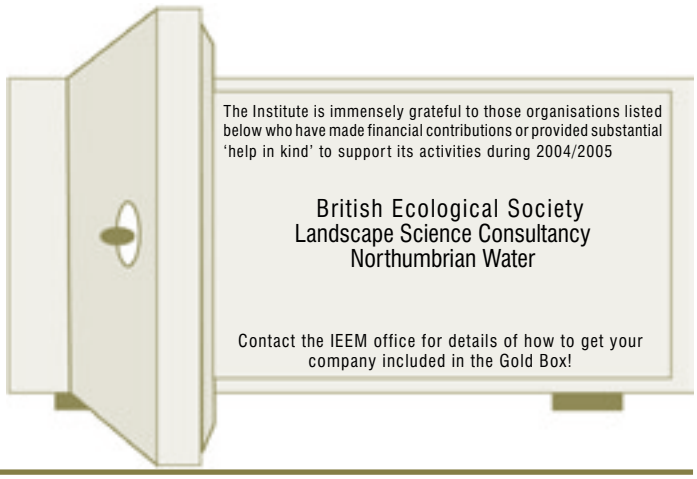
Biodiversity and the UK Energy Policy

In the very week that the Prime Minister has launched a review on energy policy, IEEM would do well to consider the implications of the various forms of energy production for ecologists and biodiversity and whether they can or should be separated from the concerns of society at large. In this brief editorial, I list most of the options available with brief comments on biodiversity implications.

- Fossils fuels – coal, gas, etc. – production of greenhouse gases particularly CO_2, global warming and implications for biodiversity
- Renewables – wind
  on shore - concern over flight paths for birds and inappropriate siting, and off shore - possible damage to seabeds and corals, often unknown flight patterns of coastal birds.
- Small scale hydro (watermills) - may affect fish and other species movements along watercourses.
- Tidal - Severn Estuary and Morecombe Bay but worries over siltation, etc.
- Wave energy – in development and loss of wave energy may have implications for coastal erosion.
- Energy conservation in buildings - positive with potential for habitat creation with green roofs – sedum, black redstarts etc.
- Solar panels - a winner except where large-scale commercial plants may lead to significant habitat damage.
- Nuclear - the big issue - apparently a real winner but the total process of extraction of increasingly low grade fuels and safe disposal may not be as energy neutral as is sometimes suggested. Also, does a 20 year lead in time make it too late?
- Hydrogen economy - hydrogen cars are just becoming a reality. The by-product is steam.
- Intensive agriculture – diary and beef production produce significant quantities of methane - reduced intensive agriculture, modulation of the CAP is a good thing.
- Biomass – good for land recently taken out of intensive agriculture, opportunities for habitat creation in plantations.
- Biofuels – a fine distinction but a product which ends up as liquid fuel, usually oils *e.g.* rape oil and sunflower oil. The drawback may be the amount of energy required to produce the end result.

So the question is whether the various alternatives add up to a strategy that can really reverse global warming. The nuclear option may be difficult to oppose on ecological grounds alone but if nuclear is the essential missing ingredient, we are faced with the awkward question - is it more important to save biodiversity for future generations or to save future generations from nuclear risk? Let's have a discussion forum on this on the IEEM website!

Jim Thompson



In recent years, Portland has seen local steelhead and salmon species listed under the Federal Endangered Species Act [5], portions of Portland Harbor listed under Superfund (CERCLA) [6], and was forced under a settlement of a Federal Clean Water Act citizen suit to reduce combined sewer overflows into local waterways (an effort expected to cost $1.4 billion) [7]. In the face of growing development pressures, approximately 388 miles of urban streams have disappeared into underground pipes and more than 213 miles of Metro area streams have been listed by Oregon Department of Environmental Quality as *'water quality limited'*. In 2004, Oregon voters driven by anecdotal stories of unfair implementation passed a ballot measure, which directly undermined Oregon's visionary land-use planning system. Ballot Measure 37 requires that government pay property owners anytime a new regulation reduces the value of that property (with otherwise undefined exemptions for regulations necessary to meet federal mandates or protect human health and safety) [8]. Although Measure 37 was recently overturned on constitutional grounds by the Oregon courts, the future of land-use planning in Oregon is anything but certain and the chilling effect in implementation of new regulations is apparent.

The Portland Metropolitan Area, which sits at the confluence of the Willamette and Columbia Rivers is visited by more than 209 avian species each year. It is home to 5% of the known state listed peregrine falcon eyries in Oregon [9], 5% of the known federally listed threatened bald eagle nests in Oregon [10], provides passage and spawning areas for federally listed salmon and steelhead stocks, and possesses the second largest known breeding area for listed 'sensitive' western pained turtles in the state. A 2004 report by the National Wildlife Federation *et al.* entitled 'Endangered by Sprawl' places the imperative to protect native species in urban environments in perspective:

'Rapid consumption of land could threaten the survival of one out of every three imperiled species in the US….Runaway development threatens the very survival of these national treasures and habitat protection and underscores the urgency for comprehensive habitat protection strategies and planning for green infrastructure.'

The report goes on to note that of approximately 6,400 imperiled or critically imperiled species in the United States, 61% are found in urban areas and 31% are found exclusively in urban areas. The Portland Metropolitan Region is home to 45 of these species [11].

Portland Metropolitan Region Approaches to Protecting Natural Resources

Beginning in 1989, with a grassroots citizen effort to establish a *'cooperative regional system of natural areas, open space, trails, and greenways, for wildlife and people'* the Portland Metropolitan Region has been developing an expanding array of tools for protecting natural resources within the urban growth boundary. Portland Audubon begins with the premise that while maintaining the UGB is important, protecting natural resource inside the UGB is both imperative and realistic. The remainder of this paper outlines some of the tactics currently being employed in the Portland Metropolitan Region to bring this vision to reality:

Regulatory Approaches

In 2005, Metro completed work on an eight year long process to develop and adopt a fish and wildlife habitat protection plan as mandated under Oregon statewide land-use planning Goal 5. The stated goal of this effort is *'To conserve, protect and restore an ecologically viable corridor system, from headwaters to the confluence with other streams and rivers, and with their floodplains, in a manner that is integrated with the surrounding urban landscape'*. At the core of this effort was arguably one of the most sophisticated urban natural resource mapping efforts ever undertaken in any metropolitan region. This effort identified approximately 74,000 acres of regionally significant riparian and upland wildlife habitat of which nearly 30,000 acres were at that time unprotected. This effort was significant for its recognition that the protection of natural resource values, such as habitat connectivity and water quality, necessitates not only acquisition of ecologically important anchor sites, but also habitat protection on private property. Despite a strong anti-regulatory atmosphere, a final program was adopted in 2005, which established regulatory protections for all identified significant riparian habitat (including 150 foot buffers for intact riparian habitat bordering stream corridors) and performance standards for all identified regionally significant upland habitat [12].

Acquisition

In 1994, citizens of the Portland Metropolitan Region overwhelmingly voted to pass a Greenspace Bond Ballot Measure, which allocated $135.6 million to purchase 8,000 acres of ecologically significant habitat and trail linkages. Significant features of the bond measure included a focus on a limited number of target areas to ensure that ecologically significant geographic units of habitat would be acquired, a limited 'local share' distributed to local jurisdictions to allow purchase of parcels that might be of significance to immediate populations, but which might not meet the criteria to be considered 'regionally significant', and a 'willing seller' approach that deliberately avoided the specter of land condemnation [13].

Ross Island, in downtown Portland, is targeted for aquisition by the city (photo by Jim Labbe)

In 2006 Metro, will bring another Greenspace Bond Measure to the ballot, which in many ways will replicate the 1995 measure. One significant addition will be the inclusion of an 'Opportunity Fund' that will allow for grants to be distributed to allow for greater flexibility in selecting projects. Some potential targets for the opportunity fund include habitat acquisition in 'under-natured' areas of the region and a revolving fund that would allow for temporary acquisition of parcels on which environmental easements would be established prior to resale. Despite a poor economy and significant funding deficits, particularly in the area of education, early polling has shown that residents across the Portland Metropolitan Region representing all demographics will support this measure. Furthermore, when queried as to what the primary objectives of the acquisitions should be, water quality and wildlife habitat polled first and second by wide margins over such other objectives as access, recreation, trails and even enhancing certain educational aspects of the Oregon Zoo.

Restoration

Redevelopment often offers the greatest opportunities to correct the mistakes of the past. Perhaps the most significant example of this in the Portland Metropolitan Region can be found at South Waterfront, a 140-acre contaminated brownfield site located at the southern edge of the downtown core of Portland that currently offers little for either humans or wildlife. However, at full build-out this site will become the highest density development in Oregon's history providing jobs for 10,000 people and homes for over 5,000 people. By working with existing property owners, developers, housing, transportation and conservation advocates and natural resource agencies, the City of Portland has

developed a plan that will also include a 1.1 mile long, 100-150 foot wide 'naturalistic' greenway, bank and in-water restoration to provide habitat for endangered chinook, and coho a steelhead, using state of the art stormwater control systems and green building techniques. The City has used a variety of financial incentives such as increased building height allowances to motivate developers to move beyond minimum greenway code requirements. South Waterfront stands as an example that, in an urban context, high density development can actually facilitate ecological restoration.

Urban Design and Stormwater Management

The Portland Metropolitan Region is doing perhaps its most innovative work in the area of stormwater management. The City of Portland Bureau of Environmental Services (BES) has just completed work on a watershed framework and action plan; the Framework establishes four core goals for achieving watershed health: improved hydrology and water quality and protection and restoration of physical habitat and native biological communities. The underlying assumption of the Framework is that *'urban areas do not have to contribute to the degradation of clean water, or be devoid of native species and thriving natural systems'*. Unlike many other urban protection and restoration efforts, the Framework recognizes that watershed health can only be achieved by focusing on the entire watershed including the waterways themselves, riparian areas and the all too often ignored uplands.

The Framework takes a two-track approach to achieving the four watershed health goals. First, the Framework assimilates, organizes and models a tremendous amount of data regarding historic, existing and desired watershed conditions in order to determine which combination of strategies and actions may best be employed to promote watershed health. In doing so, the Framework has created an intelligible scientific basis for prioritizing conservation projects at a time when conservation dollars are at a premium. Second, the Framework creates the basis for ensuring that all City projects and activities are *'planned and conducted in ways that are compatible with watershed health goals'*. In the long run this may be the plan's most significant contribution in that creating an ecologically viable urban landscape will be accomplished not by doing individual ecologically sustainable projects but rather by making sure that all projects are ecologically sustainable. This marks a significant philosophical shift for the City from simply relying on BES to utilize a relatively limited budget to implement individual stormwater reduction projects and to respond to individual legal mandates (such as the Clean Water Act) to a proactive approach that recognizes that all City Bureau projects must, to the degree feasible, reduce stormwater runoff and incorporate the most effective green development techniques.

Curb extentions to reduce stormwater runoff have been popular in many neighbourhoods (photo by Mike Houck)

The efforts of this program to date have manifested themselves in a proliferation of eco-roofs (including both the Multnomah County and the Metro Government buildings and Portland recently announced plans to study the feasibility of adding an eco-roof to City Hall), green streets, bioswales, curb removals and sidewalk extensions, day-lighting of long buried creeks, removal of impervious surfaces and reduction of piped water directly into streams and rivers. Increasingly, stormwater reduction projects are becoming part of the aesthetics of the community. Neighbourhoods have offered to pay for their own sidewalk extensions. Toyota voluntarily removed a 1,000 foot long portion of the parking lot at its northwest auto loading center in order to establish a 150 foot wide natural buffer between its facility along the Willamette River.

Living with Urban Wildlife

While it is now increasingly acknowledged and accepted that habitat protection and restoration must be considered along with transportation, housing and other aspects of the urban infrastructure, cities in the United States are only now beginning to recognize a necessity to manage the wildlife populations that utilize this urban habitat. The management that does exist is often undertaken in response to catastrophic declines (species listed under the state and Federal Endangered Species Acts) or *ad hoc*, in response to direct conflicts with human activities. As a result, our urban and suburban landscapes increasingly serve as sinkholes for species that inhabit and migrate through our metropolitan areas. Audubon believes that protection of urban wildlife populations requires not only strong regulatory and incentive-based habitat protections, but also development and implementation of wildlife management policies and strategies.

The Audubon Society of Portland initiated its 'Living with Urban Wildlife' Program in the fall of 2003 with start-up funding from Oregon Department of Fish and Wildlife CJS-CARA Fund. We believe that Living with Urban Wildlife is the logical next step to compliment our longstanding efforts to protect and restore urban wildlife habitat. We focus at both the micro and macro levels [14].

At the micro level we have established an urban wildlife resource centre that is available 365 days a year to provide advice and resources to help private citizens, businesses, agencies and neighbourhoods prevent and resolve human-wildlife conflicts. Currently, the resource centre receives approximately 15,000 phone inquiries/year. Examples of the types of issues addressed range from advising citizens on how to keep birds from running into windows and cats from predating on birds to advising a local school on how to protect the largest known Vaux swift migratory roost site (35,000 swifts per night during the month of September) in the United States, which happened to be located in their furnace smokestack.

Five percent of the known peregrine falcon nests in Oregon now occur within Portland City Limits (photo by Robert Sallinger)

At the macro level we have established a multi-agency urban wildlife working group to develop model polices to manage species found in the Metropolitan Region. The focus of this committee is not on threatened and endangered species that have typically received the bulk of attention, but rather a broad spectrum of more common species selected for their potential to help maintain biodiversity in the region. For example, the working group is currently looking at urban Canada geese, a species that has had explosive population growth in urban areas

across the United States with resulting impacts including reduced water quality, habitat degradation and increased conflicts with humans. We have also established a series of 'Living with Urban Wildlife' workshops that have brought nationally recognized experts to Portland to discuss topics ranging from reducing beaver damage at restoration sites to developing an ecologically responsible response policy to address West Nile Virus. Finally, we have developed an aggressive outreach effort to raise awareness of urban wildlife populations and encourage good stewardship. In 2004, we teamed up with a local television station to produce a series of well-received public service announcements focused on avian species found in the Portland Metropolitan Region.

Two examples of our efforts in this arena include a 'Peregrine Falcon Management Plan' developed collaboratively with the Oregon Department of Transportation to protect peregrine falcons nesting on urban bridges and the 'Portland International Airport Wildlife Hazard Management Plan' developed collaboratively with the Port of Portland. When peregrine falcons (then listed as endangered under the Federal Endangered Species Act) first established themselves on Portland's Fremont Bridge in 1994, biologists expected that as in other North American Cities, their success rate would be low. Active management has instead resulted in a situation in which 5% of the known peregrine nest sites in Oregon, including two of the top five most productive nest sites, now occur within Portland City Limits. In 1996, Portland International Airport, under pressure from the conservation community, abandoned a primarily lethal approach to reducing potential air traffic hazards presented by wildlife and instead moved to a new approach that prioritized hazing, habitat modification, and science-based risk assessment. Originally derided by the Federal Aviation Administration (FAA) as being 'too experimental', it is now being emulated with the enthusiastic support of the FAA at airports across the United States.

Coalition for a Livable Future

The Coalition for a Livable Future (CLF) was formed in 1994 by the Audubon Society of Portland, 1,000 Friends of Oregon, the Bicycle Transportation Alliance, Urban League of Portland, Ecumenical Ministries of Oregon, and others [15]. These organizations recognized that all too often social interest advocacy groups are pitted against one another in battles for scant resources, public and political attention, and limited funding opportunities. The Coalition recognized that such issues as affordable housing, transportation alternatives, social services and a healthy environment are all part of a healthy, just and sustainable society and that each of these objectives would be best served by a collaborative approach that takes advantage of each organizations individual expertise but which demands that all of these issues be adequately addressed.

The mission of the Coalition is: *'To protect, restore, and maintain healthy, equitable, and sustainable communities, both human and natural, for the benefit of present and future residents of the greater metropolitan region.'* In addition, the Coalition has adopted a set of five objectives that all members agree to work on. These are as follows:

1) Protect the region's social and economic health including: preventing displacement of low and moderate income residents and people of colour; assuring equitable access to employment and affordable housing throughout the region; reversing polarization of income;
2) Develop a sustainable relationship between human residents and the region's ecosystems by: changing patterns of urban expansion to more compact neighbourhoods; expanding transportation options; protecting, restoring and maintaining healthy watersheds, fish and wildlife habitat, and Greenspaces both within and outside the Urban Growth Boundary;
3) Assure fair distribution of tax burdens and government investment within the region;
4) Promote a diverse and tolerant society; and
5) Increase public understanding of regional growth management issues, develop effective democratic discourse, and promote broader citizen participation in decision-making regarding regional growth issues.

Today, the Coalition has expanded to over 60 groups and has been able to hire three full-time staff to coordinate its efforts. Contrary to some early and understandable concerns, the Coalition has not competed for funding with individual member groups but rather has been able to generate new revenue streams from funders (especially large private foundations), which are increasingly enthusiastic about collaborative, multi-disciplinary approaches to addressing societal challenges. The collaborative effort has also allowed members to effectively channel funds towards areas that have historically been under-funded. Perhaps most importantly, each of the member organizations has gained a greater understanding and appreciation for a wide array of social issues with which their own agendas must be harmonized if they are to ultimately be successful. The collective weight of the Coalition has been brought to bear to move a broad social agenda forward. It sends a uniquely powerful message when for example at a hearing on greenspace protection, advocates for transportation, housing and faith-based organizations, testify as to how important natural resource protection is to their constituents.

An example of the Coalition's work is a Regional Equity Atlas scheduled for completion by the start of 2006. Member organizations have spent more than two years mapping and analyzing the distribution of affordable housing, transportation opportunities, and access to parks and natural areas throughout the region. The Atlas will help ensure that these vital amenities are more equitably distributed in the future.

Conclusion

Despite significant challenges presented by population growth, economic recession and an anti-regulatory movement, the Portland Metropolitan Region has continued to make forward progress in protecting and restoring natural resources within the urban interior. A robust effort that includes regulation, acquisition, restoration and stormwater management has been augmented by newer initiatives to manage urban wildlife populations and build coalitions among a broad array of progressive conservation, transportation, affordable housing, and social welfare organizations.

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50, Not Out!

Dr Chris Spray MBE CEnv MIEEM

As some of you will by now have realised, this edition of *In Practice* is number 50, and in an idle moment or two on the train back from a recent IEEM Council meeting, I couldn't help but wonder how it compared to IEEM's first such newsletter – were we still interested in the same issues? Had progress been made? What had happened to style and content over the years? Did any of us have any hair in those days? - so, armed with the relevant issues, I spent a little time looking back and reviewing them.

Volume 1, Number 1 was proudly called the *Bulletin*, and came out some 14 years ago, in October 1991. The front cover style, with banner logo and title remain remarkably much as it was then, except the name change to *In Practice* and the welcome addition of a colour photograph. Indeed, the early edition had no photos at all (so no information to be gleaned on hair loss!), but it did contain an appropriate cartoon by Neil Bennett. Today's paper quality feels slightly weightier and the length has doubled from a mere 16 to 32 pages.

The layout also shows remarkable resilience over time; the early division into sections serving us well over the years - or is that inertia? Thus the lead front page story has always been a strong one – '*Yet another Professional Institute!*' shrieked Peter Edwards' opening title in 1991, as he asked why we needed another professional institute? who was going to join? and what would it do? (could that be referring to SocEnv in 2005 methinks?). Over the years, the answers have become self-evident as increasing numbers have joined and the Institute has shaken off its early concerns to grow in number, relevance and influence.

Inside, *Bulletin* number 1 began on the editorial page with new chairman, Tony Bradshaw's cry to arms for progress and cooperation between organisations. This was followed by three articles: the first by another past chairman, David Hill, on ecological consulting and NGOs (so no change in interest in that topic, or contributions from its author!). The others covered legal developments (the Environmental Protection Act, by Graham Jukes), and technology (GIS for environmental professionals, by Michael Clarke), so again little change in interest and relevance today there either.

The centre spread was the draft Development Plan, by early IEEM stalwarts Phillip Edwards, Sue Everett and David Stubbs, with the priorities for 1991-1996 clearly laid out. The 'In Parliament' section next featured some (now old) 1991 favourites, such as the Badgers Act, the Natural Heritage (Scotland) Act (which set up SNH – but no mention of moves to Inverness at that time) and the Wildlife and Countryside (Amendment) Act.

Number 1 included, as now a section called 'Briefing' (now 'News In Brief'), with information on Countryside Stewardship, grants from English Nature and an explanation, by Carol Crawford of the Forestry Commission's extended woodland grant scheme. Unlike today however, there was no section covering what was 'In the Journals' – for me one of the most interesting areas of the current *In Practices*. There was, however a section on 'Publications', akin to today's 'Recent Publications' section, but then less well developed.

However, under the book notices one caught my eye – 'Survival of the Fairest: can women make it to the top in the conservation movement?', which featured the results of a specially commissioned survey from BANC. How far, I wonder have we moved on from then, when 49% of respondents felt they suffered from patronising attitudes from male colleagues and 36% had their opinions dismissed. At our recent IEEM annual conference in Bournemouth elements of this same subject were raised when a comparison of the presentations revealed that only two of 24 were given by females, despite a far higher percentage being both at the conference itself and in the Institute. Despite the fact that our last president and our new vice president are women, and in Baroness Barbara Young, one of our patrons we have one of the most influential voices in ecology and conservation in the UK (Margaret Beckett, one might argue is another), I suspect that the situation has still not changed as far as it needs to.

And finally, the 'Diary' section, with its list of forthcoming events occurs both in our first and current editions. What there was not then, compared to now, is any mention of IEEM conferences or training courses; an important development not yet off the marks in 1991. Instead, there were more international conferences, though I doubt many of our early members were that interested or able to attend some of the more exotic of these, and by comparison today's lists are much more local and relevant. The topics of events being held though sound very familiar, starting with the *raison d'etre* of the *Bulletin* and *In Practice* itself – 'Communicating environmental issues'; with others on 'Sustainable economic development and ecology' (but in Bulgaria, not Bournemouth!); 'Conservation and the planning system'; 'Environmental change and the ecological effects'; and 'Defining solutions to environmental problems' – which is nicely where we came in right at the beginning and what we are still trying to promote and achieve all these years later.

Happy reading for the next 50 as well.

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Volume 1
Number 1
Oct 1991

BULLETIN

Yet Another Professional Institute!

Peter Edwards

Why do we need yet another professional institute? Who is going to join it, and what will it do? The working party set up by the IEES spent two years investigating these questions before it finally concluded that a new organization was essential to represent ecologists and environmental managers. One of its most important sources of evidence in reaching this conclusion was a questionnaire issued during 1990 in the *IEES Bulletin* and in the BANC journal *ECOS*. Ultimately, the membership of any organization is self-selecting, and the IEEM will come to reflect the concerns and interests of those who choose to join it. However, it may be of interest to paint a profile of the interests and concerns of the respondents to the questionnaire. The questions concerned the need for a new institute and whether the working party's proposals were supported; respondents were also asked about their current employment and their professional affiliations, and were invited to comment on the proposals.

A total of 650 replies was received, which from the previous experience of those journals, was an exceptionally strong response. The verdict was overwhelming. Ninety per cent of respondents believed there was a need for a new institute to represent ecologists and environmental managers, and supported the proposals. *Strong support, long overdue, vitally important* and *urgent* were among the most frequent comments. Several replies endorsed the need for a code of conduct based upon fundamental principles of environmental ethics. As one comment put it, *a code of practice and evidence of professional competence are urgently required to eliminate the 'cowboys'*. There were several calls that the Institute should set high standards of entry in order to gain credibility, but others were concerned that there should be the opportunity for entry for those without formal qualifications in a relevant subject.

Most of the respondents who opposed a new institute did so for two main reasons. One group expressed an antipathy to professional bodies of any kind, some suggesting that they were elitist and served only to provide letters to place after one's name. One respondent, himself an employer of ecologists, even stated that he would discriminate against anyone who was a member of IEEM. However, the majority of dissenters felt that existing organizations, and particularly the Institute of Biology and the Landscape Institute, already provide adequate professional representation for ecologists and environmental managers. There was concern that another institute would be confusing, and would reduce the effectiveness of the existing organizations.

The supporters of IEEM had clear views about what the institute should do, providing a challenging agenda for the IEEM.

Establish career structure and raise the status of 'genuine' ecologists; Regulate standards of ecological practice and consultancy, and prevent the profession being brought into disrepute; Provide a link between academics and industry; Provide equivalent status to other professions; Enhance the public perception of ecology and fight against the brown bread and sandals syndrome; Limit the activities of people doing underpriced consultancy.

There were also strong opinions about what the institute should not become, many of which reflected dark suspicions about professional bodies as exclusive cliques and cartels. One respondent described his *concern that it should not be a middle-ground professional prize and career determining cartel.* Another reflected, in even stronger language both the urgent need for an institute, and the potential pitfalls. *Ecology/environmental management as a profession is in a desperate state of identity crisis. The term 'ecology' has been bastardized almost beyond hope of recovery by populist pulp-mongers and academic ass-holes. A new institute will have to fight for the survival of the discipline, and will need to be aggressive, forward-looking, international, and boldly publicist—its target is world opinion. But I fear this final chance will be squandered by woolly-minded self-satisfied, pusillanimous academics, and the profession's last stand will fade out in the mess of club tie pins, conversationes, and bogus academic titles.* We were pleased to note that despite these strictures, the respondent did ask to receive further details!

Several practical problems were raised in the comments, such as how eligibility for membership can be gauged, and how standards of professional practice can be enforced. These are clearly major issues which IEEM will have to tackle. However, by far the commonest complaint was the cost of membership. Many respondents, especially those in the voluntary sector, objected that the likely subscription would be more than they could afford. Some asked whether a two-tiered subscription was possible, to allow for those on low incomes. As we indicate elsewhere, the subscriptions are relatively modest compared with those of comparable professional bodies, and are the minimum needed to support an effective organization. However, many ecologists and environmental managers are notoriously poorly paid (itself a powerful argument for a strong professional body) and the cost of membership is clearly a serious difficulty.

...continued on page 14

EURECOL - The 10th European Ecological Congress, Kusadasi, Turkey

Jim Thompson

This congress was organized by the European Ecological Federation, the Turkish Ecological Society and the Ege University Centre for Environmental Studies. Going by the 609 pages of the Eurecol conference programme, this was an event not to be missed. Indeed it had its memorable moments. The location at Kusadasi, near Izmir, on the southern coast of Turkey was an out of season large hotel complex. IEEM has also had its conferences in out of season coastal resorts but more in hotels where the odd bit of loose plaster might be found in a pint of beer rather than this very grand modern centre.

Coastal development at Kusadasi

I was asked to chair one of the morning sessions and also presented a paper on professional issues, using the IEEM as an example. This seemed to go down well. To the majority of the (largely Turkish) audience the concept of a professional Institute within an ecological context was clearly new and so the presentation seemed worthwhile. IEEM also had a display and quite a bit of material for distribution, which I am pleased to say seemed to be fully taken up. The conference was perhaps marred by the significant number of speakers who failed to turn up on the day, even including one chairman. This meant that planning a programme involving switching between the parallel sessions to hear individual papers usually did not work.

Representation by the UK was scant but interestingly, there were 37 ecologists from Spain, which is a reflection on the increased profile of ecology in that country. The largest contingent, as might be expected, was from the host country, Turkey.

To my mind the highlights were the four plenary lectures:

The Hydrogen Economy Solution to Ecological and Environmental Problems by I.E. Ture from Turkey. The theme of the talk was that while some alternative sources of energy, particularly hydrogen may appear to be expensive; this is not the case when all the social costs of fossil fuel based energy systems are taken into account. Despite George Bush, Arnold Schwarzenegger is doing great things to promote hydrogen vehicles in California and a real contribution is possible towards combating global warming.

Conservation and Agriculture in Europe: Conflict or Partnership by James Bullock, R.F. Pyewell, S. Lake and K.H. Holder from CEH, UK. From the IEEM viewpoint, the paper by James Bullock of CEH was probably the most relevant – it was a wide ranging overview of the options for land management in relation to the decline of intensive agriculture. It pointed out that although intensive agriculture can be blamed for much habitat loss there are significant areas where the current biodiversity is dependent on the maintenance of usually traditional agricultural systems. Where these decline there is also loss of biodiversity. The challenges are really how to repair damage caused by intensive agriculture and how to maintain the diversity associated with more traditional agriculture. Creation of nature reserves is only a partial answer. Harnessing the current expertise of farmers seems to be the way forward but the path is not an easy one. The wilderness idea, which has gained some support in the press recently – encouraged by the trials in Holland at the Oostvaardersplassen and reported recently in the Press and by Hans Kampf who spoke at our Bournemouth conference, seems unlikely to be a starter in many parts of the UK because of the impact on current landscapes and the largely unknown outcomes. A reprint of this talk may well make it into the next edition of *In Practice*.

Disruption of Plant-Animal Mutualism as a Result of Biological Invasions by A. Travaset from the Mediterranean Institute of Advanced Studies, Mallorca and D.M. Richardson from the University of Stellenbosch, South Africa. This was for me an insight into aspects of invasive species I had not considered - the disruption of pollination and seed dispersal processes via the introduction of alien pollinators, seed dispersers, herbivores, predators or plants.

Ecology, Law and Forensic Science by Bryan Turner of King's College, London. This had the audience fascinated by an account of how ecology can contribute to legal processes. I had heard of forensic work to examine bits and pieces on clothes, such as pollen grains, but this was quite new. Bryan, being an entomologist, reported how measurement of the size of blowflies can be related to the time of death and estimates of how long it takes for stinging nettles to recover from trampling can be related to the time that a body might have been dragged through the undergrowth. There were other references to soil analysis in the headless corpse found in the Thames a couple of years ago and how this, through analysis of soils in the stomach, was linked to a ritual killing in Nigeria and led to a significant number of arrests. On the whole though, this was not a paper for the weak of stomach!

On the lighter side, the opening ceremony by candlelight at the Roman Library in Ephesus was magic if not a little cool, especially if you were dressed in a toga (not me!). On another evening, I am told that the belly dancer was superb; I am not quite sure how I missed her!

The field visit on the Thursday, 10 November to the nearby Dilek Peninsula and Buyuk Menderes Delta National Park was fascinating. On the way the buses stopped for a minute's silence to commemorate the death in 1938 of Mustafa Kemal Attaturk, the father of the modern Turkish state. The Dilek peninsula is covered in a quite lush Maquis vegetation with apparently 804 species of plants including substantial amounts of *Quercus ilex* and *Quercus coccifera* with *Arbutus unedo* and *Arbutus andrachne*. The biodiversity of Turkey is impressive in the extreme and the total number of plant species approaches 9,000 compared with the UK of about 3,000. In the delta there are about 250 bird species including flamingo, the pygmy cormorant and the Dalmatian pelican. Developments along the coast are proceeding at an enormous rate with properties advertised in numerous estate agents mostly in pounds or euros. The scene is reminiscent of some coastal parts of Southern Spain but the cut-off as soon as the National Park Boundary was crossed was dramatic and a real encouragement.

The contrast of Dilek Peninsula

The organizers, under Professor Umit Erdem, deserve credit for a good conference, which on the whole, was a real success. The exposure to a wide range of ecological issues and research topics is something the Turkish postgraduate students especially, will remember.

European Nature Conference 2005, 21-25 September, Apeldoorn, the Netherlands

Our Landscape: Space for Nature, Opportunities for People

Jim Thompson

This was a joint meeting between Eurosite, Europark, the European Centre for Nature Conservation (ECNC) and the European Environmental Bureau and hosted by Natuurmonumenten.

One of the features of the Conference was the launch of the Apeldoorn Appeal, which was intended to put some weight behind the Countdown 2010 concept, which it is recognized has some way to go in capturing the imagination of the public. A brief summary of the appeal is as follows:

- we need new conservation approaches;
- connect nature with nature: create a resilient European ecological network;
- connect people with nature: create new and challenging alliances among all relevant stakeholders; and
- connect policy with practice through more and better cooperation.

Let's keep these messages alive!

The theme of the declaration underpinned much of the programme. As a meeting, this was much more about networking and celebrating the 100 years of the Natuurmonumenten in the Netherlands – a local equivalent of the National Trust but with the focus firmly on conservation of habitats and landscapes. It attracted about 600 delegates and was quite a triumph of local organization. It was good to make contact with a number of former acquaintances in Europarc and Eurosite, which made me think that IEEM should be more closely involved with both and might provide a useful service in fostering the professionalism of those involved in these site management issues.

I confess that a plenary lecture on ecological connectivity and metapopulation theory left me not much the wiser but the reception at the local zoo in Apeldoorn with an impassioned message about the value of zoos for biodiversity conservation somehow seemed more my level. Another interesting session was the discussion group between the key people of the various organizations involved – Fiona Reynolds from the National Trust, Francis le Tourneaux of Eurosite, Ladislaw Miko from the European Commission, Brian Unwin of ECNC, Erica Stanciu of Europarc and Sylvie Ofstad from Pebbles, with a moderator who prodded the panel into responses on the many issues involved.

Connectivity really is one of the issues to the fore in the Netherlands and with it, an enthusiasm for networks and also a government approved and funded target to achieve a National Ecological Network by 2018 extending not just within Holland but also to surrounding areas in Germany and Belgium. Also interesting is this concept of 'wilderness' side by side with high population density. This has received quite a bit of attention within the UK press as a solution for land use as more becomes taken out of agricultural production – see also the paper by James Bulloch at the Eurecol 2005 conference. The network was given an enthusiastic airing by Hans Kampf at the conference in Bournemouth. Part of this network is also the collection of National Parks in the Netherlands, which are both impressive and varied.

Apeldoorn was a fitting place for a conference with the nearby Het Loo palace. As a stately home, the interior has many of the usual features you would expect, but the grounds have the most staggering array of topiary ranging from miniature box trees through to gigantic hornbeam arches. Also it was the home of the late Prince Bernhard, the Founder-President of WWF and who in his long life established a formidable reputation for conservation worldwide.

One of the innovations of this conference was a series of parallel sessions for students. These had been invited from all over Europe and had been funded by Natuurmonumenten. Many had attended the sessions and had also gone on site visits. In the final and I have to say quite inspiring session, the 20 or so students contributed to four debates. This all took place in English which was not the mother tongue of any of them and was good humoured and lucid. Under the banner of European Nature needs a Young Vision, the following points were debated:

1. It is better to realize large nature reserves instead of building corridors between small nature reserves.
2. Quality before quantity. There is more than enough nature. The important thing is to experience nature.
3 Management of nature by farmers is much better than by nature conservation organizations.
4. Nature knows no borders and changes because of climate change, therefore national targets are no longer relevant. We need European nature targets.

Attendance at IEEM conferences very rarely includes students unless specifically invited through the local university so perhaps IEEM should think about something on these lines for its next conference.

Student Group

Celebrity Planting for National Tree Week

Jason Reeves

On Wednesday 23 November this year celebrities Jon Snow and Terry Molloy launched the 30th annual National Tree Week in Bernie Spain Gardens in the Coin Street Community on London's South Bank. The two celebrities, from Channel 4 News and BBC Radio 4's The Archers respectively, helped in the planting of a young Eucalyptus *Eucalyptus dalrympleana*, chosen because it is a 'windfirm' species that will be able to withstand the well-known winds of the Coin Street Community near the Thames. The event, which marked the start of the winter planting season, was run from Wednesday 23 November until Sunday 4 December by The Tree Council which is an umbrella organisation for over 150 groups engaged in activities to benefit trees in the UK. This year the focus was on planting in 'your' ground. Organisers of the event encouraged participants to plant trees in the places where they live, work, learn and play. An initial campaign in 1973 entitled *Plant a Tree in '73* was to spark the formation of The Tree Council and the first National Tree Week was held 1975. Since then over 20 million trees have been planted including thousands that were planted in this year's festivities all over the country.

To coincide with the launch of this year's National Tree Week, The Tree Council has published a book written by Jon Stokes, John White, Archie Miles and Derek Patch, edited by Peter Branchflower, and entitled *Trees in Your Ground*. The book is primarily confined to the theme of this year's National Tree Week and thus the book deals mainly with issues of trees on a local scale. There are six sections to the book and each deals with a separate point of the main theme. These sections are:

1. Trees In Your Ground Matter
2. The Value Of Trees In Your Ground
3. A Brief History Of Trees In Your Ground
4. Choosing Trees For Your Ground
5. Planting And Caring For Trees In Your Ground
6. Managing Trees In Your Ground

This year's National Tree Week and the launch of the new book were both sponsored by National Utilities, one of the world's largest utilities companies, who have also sponsored The Tree Council's Warden Scheme since 1997 which encourages members of communities to volunteer their time to look after their neighbourhood's local trees. One of the newest wardens is the above mentioned Terry Molloy who said of the newly launched book, *'I know that The Tree Council looks to Tree Wardens to play a key role in National Tree Week, not only by planting trees in their communities but also by encouraging their neighbours to do likewise. This new book is going to be really valuable in helping people to choose the right trees to plant in their local patch – whether in a village like Ambridge or a city like Birmingham – and then look after them and make sure they thrive.'*

The work done by The Tree Council is incredibly important to the UK as it is still one of the least wooded countries in Europe and we hope they have every success in the future.

The book *Trees in Your Ground* (ISBN 0-904853-05-5) is available from The Tree Council for £7.99 + £1.00 postage and packaging.

For more information on The Tree Council please visit www.treecouncil.org.uk

Survey Licences: Where Do We Stand?

Matthew Bowell MIEEM

As a consultant animal ecologist, it seems to me that those of us in this field operate in a bit of a black hole (one of many some would argue). There is a clear requirement for surveys of species protected under The Wildlife and Countryside Act 1981 and Conservation (Natural Habitats, &c.) Regulations 1994. In some cases these surveys are required to apply the legislation that protects them, in other cases to inform wider planning related assessments (including the EIA regulations). Depending on the species involved, such surveys may inevitably result in an offence being committed (disturbance being the most obvious).

OK, so far so good, most of us have got one or two SNCO licences about our persons and if you haven't met anyone with a great crested newt survey licence you haven't been in this game for long.

These licences are an essential part of our job (and in many cases our CV). But, and this is the point; they don't apply to us. Licences are issued under section 16 of The Wildlife and Countryside Act 1981 and Regulation 44 of the Conservation (Natural Habitats, &c.) Regulations 1994 for the purposes of Science and Education or in some cases the purposes of conservation. Whatever you want to call it, development led ecological consultancy for the purposes of assessment within the planning process or upholding species legislation falls into neither of these categories. This is no-one's fault, practices have simply evolved since the legislation was written.

Irrespective of any previous talk about accreditation from IEEM and other bodies, in order to fully serve its members, should the Institute be making this point to legislators so as to ensure that members are at least carrying out this basic aspect of their job from a firm legal stand point?

Matthew Bowell is Head of Animal Ecology at Carter Ecological Limited

Going Wild

Mick Green MIEEM

Whilst many of us are used to preparing management plans for sites, or trying to decide whether a site is 'favourable' within the tight monitoring guidelines produced by the statutory agencies, there has been increasing interest in recent years in applying a more 'wild' approach to nature.

Earlier this year saw the publication of *Beyond Conservation – A Wildland Strategy* by Peter Taylor. Partly commissioned by the British Association of Nature Conservationists (BANC), the book offers an agenda for expanding and connecting the 'wild' areas of Britain within a concept of 're-wilding' – restoring ecosystems rather than micro-managing sites.

Across Britain, various projects are now looking at this concept and in some cases putting it into practice. These projects were the subject of 'Nature in Charge' – a workshop run by the Wildland Network– a loose affiliation of people and organisations promoting the wild concept. Meeting in the Lake District in October 2005, over 50 delegates were given details of active projects.

The workshop started with a quick introduction looking at definitions. What is a 'wildland' project? There is no one definition and it is perhaps a general term for a "transition to 'future natural'" – there is no pre-defined outcome to most projects. Many methods are used, including woodland regeneration and tree planting, changes in management practice, removal of grazing pressure and a move to more naturalistic grazing, coastal realignment and removal of soil fertility.

Presentations were given by a range of active projects, starting with those run by agencies and public bodies. The North Pennines Areas of Outstanding Natural Beauty has a management approach that includes identifying areas of 'wild' land which will become minimum intervention sites, extending areas of natural woodland and letting rivers become more 'natural' by reducing interventions. There is some tension with the existing cultural landscape, and developing large areas is somewhat restricted by land ownership patterns.

In the Ennerdale Valley in Cumbria the 'Wild Ennerdale' project is the outcome of three years of brainstorming between the two main landowners in the valley – Forestry Commission and National Trust and then joined by United Utilities, the owners of the lake – to produce a shared vision for the valley. This now involves a long term programme of re-wilding, with no definite outcomes but some intervention in the form of removing some conifers, controlling grazing pressure and type and so on, using a flexible extension of the existing Environmentally Sensitive Area designation, but some work is potentially restricted by Site of Special Scientific Interest and Special Area of Conservation designations and their more strictly defined habitats.

Projects involving NGOs included a look at the wild potential of the National Trust for Scotland's Mar Lodge estate, where work has included track removal and path restoration to limit intrusive features. The estate has undefined outcomes as opposed to the defined outcomes users of management plans are more used to. Showing 'wild' land does not have to be restricted to the uplands, the National Trust's vision for Wicken Fen describes their ambitious plans to extend the existing, small remnant of fen into a large area extending down to the edge of Cambridge. A very long term plan for land acquisition is in place, as areas become available on the open market. Restoration is driven by the hydrology and grazing and will become more sustainable as habitats appear because they want to be there, not because managers have decided they'll be there. Herbivores are allowed to act naturally so they become a part of, and therefore help shape, the environment.

Staying in the lowlands the project at the Knapp Estate in West Sussex was described, where an estate that was formerly mainly intensive arable is being slowly allowed to become wilder. The project has seen a surprisingly rapid recovery of wildlife bring enormous psychological benefits to its owners and other residents. Charlie Burrell, the owner, described how he had to learn the art of letting go, working without constant intervention. There are issues raised by definitions of good agricultural condition concerning the single farm payment and how this can be applied to 'wild' land. Another private landowner project was described on the Alladale Estate in Scotland, where there is a vision to re-introduce a full range of 'missing' animals - both herbivores and carnivores – to create not a wildlife park but a functioning ecosystem within a large enclosed estate. This is in its early days, with many potential practical issues, but is being vigorously pursued, with a view to creating income from visitors.

Finally, two community projects were presented, with tree planting and woodland projects far apart – the Moor Trees project on Dartmoor, and the Carrifran Wildwood project on the Scottish Borders.

It was clear from the discussions that followed the presentations that the 'wildland' concept is gaining a lot of advocates, and is being applied in many guises and using a wide variety of approaches. There are many potential problems, involving issues of land ownership, compliance with definitions within site designations which require a more fixed approach to habitats, issues of funding and the need for a wider suite of animals to 'manage' land to provide fully functioning ecosystems.

Full details of the workshop are available on the wildland network website, with links to most of the projects. More events are being planned, including a wild boar workshop in December and a meeting in Wales next spring. Full details will be posted on the website and events are open to all.

Further details: www.wildland-network.org.uk.
Peter Taylor's book *Beyond Conservation – A Wildland Strategy* is published by Earthscan.

Mick Green MIEEM is a Director of Ecology Matters Ltd. and a member of the Wildland Network.

Local Seeds for Local Needs Initiative Event

The North East Section's AGM on 14th September was preceded by a presentation by Bernadette Lobo, *Flora locale*'s North of England Project Officer and first outreach post covering Derbyshire, Northumberland, Durham, Lancashire, Cumbria, Yorkshire and Humberside. Bernadette spoke about *Flora locale*'sLocal Seeds for Local Needs Initiative, which aims to increase the supply and use of native flora and, wherever possible, local flora.

Flora locale work hard to spread the 'use native species' message. This is achieved in a number of ways, the *Flora locale* website (www.floralocale.org), advisory notes and provision of advice. *Flora locale* also gives presentations and provides regular training courses across the country. The website supports a native seed network, which allows registered users to post questions relating to native flora, encouraging information sharing and best practice. The questions can be viewed by all forum members, including a number of specialists in this area.

Bernadette highlighted that she will be holding a series of workshops in the coming months across the North of England to 'scope out' requirements and needs for the development of a Seed Donor Register. The register will provide details of those suppliers with native seed and plants available. Further details about the workshops will be available on the website.

Bernadette provided the meeting with the *Flora locale* Code of Practice, which provides guidelines for collectors, growers and suppliers of native flora. The perennial question of 'What is native?' was raised. *Flora locale* adopts a pragmatic approach, that being the use of material of native local origin where available; if unavailable, to source further a field, but of course the source must be native, and as local to the planting site as possible. The Forestry Commission local seed map was discussed in this context.

Bernadette raised the potential for misinterpretation of the word 'provenance'. *Flora locale* does not encourage the use of this term, because provenance is the location from where a plant or seed was collected and does not guarantee native origin. For example, a nursery growing alder may use the words 'local provenance' to denote the seed was germinated and grown in England, but in actual fact the seed could come from Poland. Always ask the specific question about origin when sourcing native flora!

Anyone requiring further information about *Flora locale*, the North of England Project and the Seed Donor Register are invited to contact Bernadette at: blobo@floralocale.org.

A succesful wild flower roadside planting

North East Geographic Section AGM 2005

The North East Section AGM was held on 14 September 2005, at Durham Wildlife Trust. The main items addressed were: a review of the year and the election of the committee for 2005/2006. Andy Cherrill was elected as the new Convener and the other committee members elected were: Ian Bond, Fiona Corby, David Feige (Secretary), Caroline Gettinby, Maria Hardy and Steve Pullan. The outgoing convener, Steve Pullan, gave an overview of the past year (see previous issue).

All present were unanimous in thanking Steve for his contribution to IEEM. Steve provided the drive behind the establishment of the Section; first as a Shadow Section and then as a fully constituted Geographic Section of the Institute. Throughout these early years, Steve acted as the regional Convener. The Section owes much of its success to Steve's drive and enthusiasm; he will continue to play an active role on the North East Committee (not to mention his contribution via Council and MAC at the national level).

Since the AGM Dr Jane Young has volunteered to serve on the Section Committee.

The North East Committee is finalising a programme of regional meetings for the year ahead. Details are available on the IEEM website or from Andrew Cherrill (andrew.cherrill@sunderland.ac.uk).

UK Judged to be in Breach of the Habitats Directive

Andrew Baker MIEEM

On 20 October 2005 the European Court of Justice (ECJ) ruled against the UK Government in a judgment which will impact upon planning and nature conservation law. The Judgment (Commission v United Kingdom C-6/04) concerns the failure of the UK to correctly transpose the Habitats Directive into UK law and is likely to require modifications to the Habitats Directive and other key aspects of nature conservation law.

The case dates back to November 2000 when the European Commission first wrote to the UK setting out its contention that the UK had not correctly transposed the Habitats Directive into domestic legislation. Compliance with the Habitats Directive required UK nature conservation law to be strengthened considerably and this was achieved through the Conservation (Natural Habitats, &c.) Regulations 1994 (SI 1994 No.2716) (Habitats Regulations). The ECJ has now ruled that the Habitat Regulations did not fully comply with the requirements of the Habitats Directive on various counts. The judgement is wide-ranging and the following is only a summary of the key aspects of the case.

Appropriate Assessment of Local Development Frameworks.
The judgment has made it clear that Local Development Frameworks and other development plans need to be subject to Appropriate Assessment. The government argued that local development plans did not, in themselves, constitute a planning decision and therefore cannot be regarded as a plan or project which could affect an SAC or SPA. The ECJ argued that development plans do, however, have a considerable influence on the outcome of subsequent planning proposals and therefore need to be regarded as potentially 'likely to have a significant effect' on Natura 2000 sites and require appropriate assessment. This issue was addressed in the Legal Circular which accompanies the new PPS9 and will have to be updated to reflect this Judgment.

European Protected Species
Both the Wildlife and Countryside Act 1981 and the Habitats Regulations 1994 include an exemption to the safeguarding of European Protected Species in that a person is not guilty of an offence under the Regulation if he can show that *'the act was the incidental result of a lawful operation and could not reasonably have been avoided'*. Member States are required by the Directive to put into place a strict system of protection for these species and the exemption contained within UK domestic law has been found to be inconsistent with the Directive.

Implementation of the Directive
The UK Government argued that many of the shortfalls identified by the ECJ were in fact addressed by Regulation 3 of the Habitats Regulations that requires Government departments and other competent authorities to have regard to the Habitats Directive. The ECJ has found this to be insufficiently precise transposition. The Court argued that taken to its logical conclusion, if this were an acceptable approach to transposition, the UK could have translated the whole of the Habitats Directive simply by use of such a general clause. The Court ruled this was not in accordance with case law relating to the transposition of European Directives.

Application Outside Territorial Waters
Finally the judgement ruled that the UK has failed to apply the Directive beyond the land territory and territorial waters including the exclusive economic zone and the continental shelf. While there had been some implementation through the Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 (SI 2001 No. 1754) the European Court considered that this falls short of full transposition of the Directive.

The UK Government is now required to address these transposition issues and it would seem likely that there will need to be a review of the Habitat Regulations in the light of this Judgment. Until such time as these issues are resolved the UK could face substantial, escalating fines.

Andrew Baker is a Partner in the ecological consultancy Baker Shepherd Gillespie and Convenor of the UKELA Nature Conservation Working Group. a.baker@bsg-ecology.com

Editors Note: Unfortunately in Andrew Baker's last article in In Practice 49, the Sandford Principle was incorrectly edited as the Standford principle – apologies for this and to Lord Sandford and thanks to Ro Scott who perceptively pointed this out.

All at Sea in a BOAT?

Dr Eirene Williams CEnv MIEEM

The first I knew was the arrival of a Definitive Map Modification Order from the County Council in November 2003. This was accompanied by a rather grudging covering note saying that as an adjacent landowner to a lane affected by the Order I was notified that the lane was to be redesignated as a Byway Open to All Traffic under Section 53 of the Wildlife and Countryside Act 1981.

A flurry of activity followed by individuals and the parish to clarify what was going on. Some people remembered informal conversations with a previous Public Rights of Way Officer about some of the parish footpaths and had not disagreed with the idea of bridle path status. Some had submitted evidence of use forms during 2002. But this BOAT Order business was a different matter all together. Some of the green lanes were already frequented by motorcyclists and off-road vehicles. People were concerned about the dangers to pedestrians and to the flora and fauna along the lanes.

Consultation with the current PRoW Officer showed that he had been following his brief to look at historical evidence of use very closely. Reams of text and maps emerged that detailed the records and minutes of meetings, as well as the not-very-extensive consultations with present users and relevant bodies. One main point to be emphasized was that safety and environmental considerations were not to be raised as this review was entirely on a historical basis.

Parishioners met and talked and were moved to write in, objecting to the Order, so that a Public Inquiry was instigated. Old people were urged to search their memories for relevant facts. All were warned that safety or ecological issues would not count. The retired lawyers and activists in the parish were pressed into late night drafting of submissions, visits to County Hall and general research into the archives and deeds of the Parish. More reams of paperwork arrived from the Planning Inspectorate for adjacent landowners, objectors and anyone wishing to speak at the Inquiry.

Just before the Inquiry in May 2005, a number of individual objectors were scared off by letters saying they would have to pay costs if the Inquiry deemed their objection irrelevant or the only one. Despite this, the Inquiry took about ten days and involved the Inspector, the PRoW Officer, a county lawyer and a secretary. Evidence was heard and cross-examined. Most individuals and groups spoke against the Order but the Trailriders sent a professional to support the PRoW Officer who had to make his case for each BOAT. The Inspector also walked most of the lanes.

The verdict given in August ran to 41 pages, plus maps, and confirmed almost all the lanes as BOATs. The amount of public money in terms of officials' time and volume of paperwork to reach this largely undesired conclusion for a small number of green lanes in a single parish is staggering. Many of us hope that some public audit of this expenditure will one day take place.

It is now suggested that the parish or individuals apply for Restricted Byway status to prevent motorised vehicles using the lanes other than for agricultural or residential access. At the same time a draft Bill 'Natural Environment and Rural Communities' includes as Part 6 a repeal of the legislation that gave rise to the above process! However, this may not be applied to those Orders already in place so restriction of our BOATs still seems necessary for the sake of walkers, horse-riders and wildlife. So the convoluted saga of our parishes' green lanes is not yet finished.

Editors Note: In my former post I had responsibility for the Rights of Way in Hampshire. Hampshire in common with other authorities was in process of the re-classification of RUPPS – Roads used as Public Paths. As I recall, in Hampshire there had originally been about 560 RUPPS which under the Wildlife and Countryside Act 1981 had to be to reclassified to one of the following :
a footpath – use for walking only;
a bridleway – use by walkers, horse riders and non motorised cycles;
a byway open to all traffic – trail bikers, fourwheeled drive vehicles, etc. (BOAT).

So Eirene is right that huge sums of money and time and very detailed research have been spent on this exercise. This is compounded often by people in villages appealing on non admissible grounds. Not liking trail bikes at the bottom of your garden is no reason I am afraid! There have been some celebrated claims – when Lord Denning, then Master of the Rolls challenged Hampshire County Council but had to admit he got it wrong!

The basis of the reclassification is historic use and historic use alone, so if someone can remember or produce evidence of use of a RUPP by a horse and most importantly, a cart 50 years ago, its fate is sealed as a BOAT. Whilst Eirene's worthy villagers might wish it were otherwise, the trail bikers and four wheeled drive lobby is pretty well organised and are quite professional in digging up old evidence. Traffic Orders are often put forward as the panacea but regulations have to be enforced and that is usually pretty low on the police priorities.

From the ecological viewpoint the real concern is the damage to the surfaces of these ways by vehicles bearing in mind that some are very useful habitat corridors in an otherwise intensive agricultural landscape.

Jim Thompson

Marine Ecological Impact Assessment Guidelines – Do we have any willing experts?

The Ecological Impact Assessment Guidelines (EcIA) refer to the need to draw up ecological impact assessment guidance in relation to marine and coastal areas. With the EcIA Guidelines (terrestrial and freshwater) shortly to be finalised and circulated, it is important to ensure that guidelines for marine and coastal areas are in fact drawn up.

IEEM is looking to members that have relevant experience in this field and are willing to assist in drawing up these guidelines. The first set of guidelines have taken some time to produce, but will provide a useful framework to enable development of guidelines for marine and coastal areas.

IEEM has already been offered support from the country nature conservation and environment agencies.

For more information please contact Linda Yost
lindayost@ieem.net

IEEM Conference Report, Bournemouth, 15-17 November 2005

'Sustainable New Housing and Major Developments – Rising to the Ecological Challenges'

Linda Yost CEnv MIEEM, Nick Jackson AIEEM and Jason Reeves

Delegates arriving for the first evening's programme were greeted by candle light! A large fire in a local scrap yard had taken out the power supply lines to Bournemouth and Poole and left the town completely in darkness. Delegates and IEEM staff rose to the occasion; David Hill, FIEEM along with Michael Shewry and Matthew Fasham officially launched the *'Handbook of Biodiversity Methods'* at a wine reception by torch light; and the IEEM South West Geographic Shadow Section flickered into life in a candle lit dining room.

David Hill and Stuart Pudney

By fortune, the hotel kitchens were powered by gas; we were able to enjoy a good dinner followed by IEEM's first international key note speech. With the laptop powered from a generator, Bob Sallinger from the Audubon Society of Portland presented 'Raising the Horizons – A View from Oregon' and set the scene for 'rising to the ecological challenges'.

With normal services resumed, Dr Chris Spray welcomed Professor Chris Baines to kick off the first morning. He emphasised the need for ecologists working with house builders to promote sustainability by encouraging a three-pronged approach for them to adopt. Firstly, to put their own house in order by choosing better materials, employing more effective building methods, improving building-site efficiency and always building for best long-term performance. Secondly, to find ways of working more creatively in partnership with manufacturers, regulators and those who champion other aspects of sustainable living. Thirdly, each new development must be considered in its wider setting. Some increase in sustainability can be achieved within the boundary of a site; so much more is possible if housing sits within a functional green infrastructure, surrounded by a neighbourhood where good environment is clearly linked to quality of life.

William Wallace from East Dorset District Council Planning Department gave the planner's view point of working *'in a part of England where the conflict between development and conservation is at its most intense'*. A dynamic area, with a buoyant economy and an attractive environment it has highly sensitive rivers and heathland, which are under pressure. Over the coming 20 years 30,000 homes are planned for the area, which will mean a large proportion will have to be built inside existing towns. William advocated the need for a larger scale plan for greenspace and countryside recreation to take the pressure off the heaths 'green infrastructure': a mosaic of countryside spaces for access and for wildlife, woodlands – existing – new, small country parks, private sector facilities – gardens, garden centres, stables, golf courses all linked by a network of greenways, rooted in the urban areas and branching out into the countryside

Roger Lewis, the Chairman of the Berkeley Group, one of the UK's largest developers, moved the debate on to sustainable regeneration of 'often *totally derelict areas and transforming them into a real community where people can live, work and play'*. He gave examples of various sustainability initiatives being adopted such as Sustainable Urban Drainage Systems (SUDS), the conservation of important reedbed areas, carbon neutral developments and renewable energy supplies. In particular, Roger spoke about the development of the London Wetland Centre where Berkeley Homes worked closely with the Wildfowl & Wetlands Trust.

The public enquiry for Terminal 5 at Heathrow airport was the largest in UK history - lasting five years; planning permission was granted subject to the diversion of two local rivers, the Colne and Longford, from the development site. David Palmer, from Black and Veatch described the work involved in their diversion. The former was built in the 1530's to supply water from the River Colne to the River Crane and Syon House, the latter was built in 1638 to supply water to Bushy Park and Hampton Court. The principal features of the diversion were off-take structures, new open channels, part enclosed channels, sediment basins, in-channel enhancements (including being designed to reduce peak flow, translocation of 1,000 mussels, 40,000 fish and a colony of water voles at its completion) and bird exclusion netting. Over 80,000 plants from 36 native species were installed in pre-planted pallets.

Phil Burston, from the RSPB, spoke on the topic of water use and its effect on biodiversity. He outlined how increased demand for water (more households) is being responded to by plans for new reservoirs and enlarging current reservoirs. However, these have implications for biodiversity; more reservoirs cause damage to headwaters/downstream wetlands, reduce freshwater flows to estuaries, less water is available for wetland creation and good ecological status is compromised. To reduce the impact on biodiversity, a number of ideas were put forward including ensuring new housing is highly water efficient, tackling current water leakage and trying to stop and reverse household demand.

SUDS was a subject touched on by several speakers, but Phil Chatfield, from the Environment Agency provided the detail and dispelled some of the myths surrounding this approach to drainage. Current drainage systems are designed to remove water quickly, the EA views this water as a problem, it adds to flooding, flushes urban pollution into rivers, prevents recharge and is a lost amenity opportunity. Impermeable surfaces prevent natural recharge and reduce base flows. At least 5% of failing watercourses are affected by urban drainage, water features are often absent in urban areas and many streams are in under-ground culverts. SUDS aims to replicate natural conditions, balancing quality, quantity and amenity and can include: living or green roofs, rainwater harvesting, permeable surfaces, infiltration, swales and filter strips, ponds and wetlands. SUDS helps to supplement water resources, protect water quality, reduce flood risk, and resources, improve amenity, enhance habitat and may reduce costs and help to alleviate effects of climate change.

Elizabeth and Bob Sallinger with Eirene Williams

The morning session was rounded off by John Devall from Essex and Suffolk Water with a water-providers perspective on how to balance supply and demand for water and the need for water resource planning. Forecasting future demand by analysing population change, housing, industry, customer behaviour, the assessment of reliable yields through quality and quantity reviews, environmental studies and licence performance, and by a twin track approach of constraining demand and sourcing new supplies are seen as the way forward. Essex provides a challenge to the water industry as it is one of the driest regions of the UK and prone to drought. There is an increasing demand for water due to new developments, increasing population and changing demographics coupled with no potential for traditional new resource development within Essex as no intrinsic water is available. There are also major uncertainties posed by climate change, time limited licences, environmental drivers and of sustainable abstraction. John stressed the need for demand management through increasing water efficiency, reducing leakage and improving the current water metering system.

For those wishing to sharpen their knowledge of UK wildlife law, John Box of Atkins Ltd. ran a workshop on 'Ecological Constraints and Opportunities'. He noted that effective development requires projects and works to be undertaken within the legal framework for designated sites and protected species, delays needed to be minimised and bad publicity or criminal prosecution avoided. Effective and economical solutions need to be found for ecological constraints and should to be incorporated into projects at the earliest stage of planning and design so as to enhance biodiversity. Impacts to wildlife occur from activity on and adjacent to a site, temporary access tracks, materials dumps, site compounds, bridges over watercourses – especially if outside the original survey area or site boundary, downstream from a site, as well as the impacts from noise, dust, or pollution, all of which need to be considered. Nature conservation designations, relevant legislation and policy guidelines (which is often country specific) all need to be taken into account to ensure that development is undertaken within the law.

Professor David Goode FIEEM, introduced Thursday morning's keynote address, which took us to Holland to consider green networks. Hans Kampf stated that between 1900 and 1990 their natural areas had halved from 900,000 ha to 450,000 ha. Concern regarding deterioration and decline in environmental quality and habitat fragmentation provoked the development of the Nature for People, People for Nature (1990) 2000 – 2020 Policy, with the aim, by 2020, of restoring 220,000 ha of land to natural habitat. Holland is using its nature reserves as a basis to establish a coherent network to secure the future of species and ecosystems, with each consisting of: core areas, ecological development areas, preservation areas, ecological connections and buffer zones. These will be linked by green networks to provide species migration. Natura 2000 forms an important part of this framework, that is also providing many opportunities for co-operation with neighbouring countries to extend ecological corridors across country borders.

Hans Kampf

The National Regeneration Agency for England is funded by and responsible to the Office of the Deputy Prime Minister is English Partnerships. Rob Shipway outlined their core work areas as: developing a portfolio of strategic sites; being the specialist advisor on brownfield land; ensuring that surplus Government land is used to support wider Government objectives (especially the Sustainable Communities Plan); helping to create communities where people can afford to live and want to live; and supporting the urban renaissance by improving the quality of our towns and cities. The Thames Gateway development is one of its major projects and throws up many challenges, and many green issues, that need to be resolved. An area of 80,000 ha, it is 60 km long and up to 30 km wide; currently, with over 700,000 homes, 1.6 million residents and 3,000 ha of brownfield land it has the potential for 120,000 -160,000 new homes and 180,000 jobs by 2016.

Dongtan EcoCity, Shanghai was among the case studies in ecological master-planning covered by Paul Johnson and Neil Harwood from ARUP. Designated as China's first 'Ecological Demonstration District' in 2001 it was to be developed as a *'model of sustainability'*. Dongtan EcoCity, on Chongming Island, is a low lying area and in predominantly agricultural use. Ecological concerns included: its wetland areas being a Ramsar site, (important for migratory birds such as – Siberian cranes, and black faced spoonbills, and also Chinese River dolphins, and Chinese alligators) and threats due to uncontrolled development, agricultural reclamation, poaching, pollution and reduction of silt deposition due to Three Gorges Dam Project; all needed to be taken into consideration in its development.

Mathew Frith, from the Peabody Trust outlined the need for a step change. With 155,000 new households projected to form each year, and the net housing stock growing by 120,000 annually in England – he stressed the need for recognition within the social housing sector of the value of green spaces, for the development of open space strategies, design guides and standards and for external partners to recognise the constraints of residential social landlords.

Imperial Wharf and Ropetackle Waterfront are examples of how this could be achieved.

Health and Nature, the critical elements for sustainable developments were considered by David Stone from English Nature. The environment, particularly those areas rich in nature, is now recognised as a key determinant of health, so there are implications for sustainable development. Recognition of the physical, mental and social health benefits of greenspace has led to standards being set for 'accessible greenspace', greenspace within a certain distance from one's home, *e.g.* at least 1 ha of Local Nature Reserve for every thousand people. Design in biodiversity was also noted as needing to address connectivity and green corridors, along with retention/enhancement of existing features, provision of play areas and the sustainable management of the natural resource.

The popularity of heathlands with both wildlife and humans leads to conflicts of interest. John Underhill-Day (RSPB) and Durwyn Liley (English Nature) set out the synergistic effects including: human disturbance, increased incidence of fires, fly-tipping and increase in nutrients from dog fouling. These had led to increased costs of wardening and a range of impacts on key species. A visitor survey to analyse the distance and methods of travel to the heaths was undertaken. By calculating the actual number of people living within certain distances from the heaths, then looking at the proportion of those residents that visit sites, a more intuitive pattern emerges and allows the number of visitors to a site to be predicted. Estimates suggest that the Dorset heaths could attract up to a million visits per annum. On the Thames Basin Heaths the figures could be much higher, which would make these heathlands one of the top visitor attractions in southern England.

Thursday afternoon's session was chaired by the new President-elect Dr Andy Tasker and opened with David Stubbs giving an update on the sustainability of the upcoming London 2012 Olympics. David's presentation focused on the *One Planet Living*® ethos of the games, which is hoped to leave a long term legacy in terms of the environment, local communities, and the Olympic movement as a whole. The talk also outlined improvement of the London 2012 sites. The games are being promoted as environmentally responsible and sustainable by reducing carbon emissions, implementing a *'no waste directly to landfill'* policy and conserving the biodiversity of the Olympic sites. London 2012 is working in partnership with many environmental organisations in order to meet these challenges.

Bristol City Council manages an extensive list of green spaces, street and park trees, allotments, historic estates, play grounds, woodlands and wildlife areas. Peter Wilkinson explained how Bristol Parks cope with this impressive

abundance of greenery. The strong partnership between Bristol Parks, Avon Wildlife Trust and Bristol's mainstream planning system has been maintained through community strategy actions and seven key outcomes (safer parks, accessible parks, cleaner parks, attractive parks and city, parks and health, parks and wildlife, and parks and communities) of the Parks Service Plan. The talk covered the Bristol Wildspace! Project, launched in September 2002, and Bristol's four existing and three planned Local Nature Reserves (LNRs). The LNRs are used to promote community ownership and thus to build a sense of community, promote the health benefits of LNRs and learning, and to improve the quality of life for disadvantaged communities including adults with learning difficulties, disabled young people, women from minority ethnic communities and people with mental illnesses.

Judy Ling Wong from the Black Environment Network gave an impassioned speech on connections between ethnic communities and green spaces; her presentation linked the social aspects of green spaces with the rest of the conference. She spoke of social exclusions and relationships and how these can be overcome and improved with the use of the environment. She also outlined the infrastructure that is needed and the barriers that need to be overcome in order to achieve this. Judy also used examples including the Sikh community of Nottingham who planted over 300 trees to create Khasla Woods in Bestwood Country Park to illustrate how the environment can play a role in social integration.

Sally Gilbert from Bristol City Council and Robert Craine from Diversity presented a talk on mitigation for slow worms in Upper Horfield, Bristol. During the Upper Horfield Regeneration Project, begun in 2002, there was increased exposure to the abundant slow worms present at the regeneration site. Unfortunately, because of a lack of understanding, they were feared and persecuted. As a result an education, awareness and appreciation of slow worms day was arranged in Upper Horfield; events, games and even food were all based on the slow worm theme. The event was so well organised that it warranted a visit from HRH Princess Anne who apparently made some of the organisers a little nervous. The presentation closed with some advice for others planning or thinking about planning a similar event.

The penultimate presentation of the day was given by Mike Wells and Gary Grant on green roofs. Global warming is leading to changes in climate and rainfall patterns, and ecosystem composition. It is also leading to an increase in extreme weather and the severity of urban heat islands. Green roofs can help alleviate many of the problems associated with global warming by improving the management of rainwater, improving the thermal performance of buildings, reducing noise pollution, improving air quality, reducing the urban heat island effect, and by providing habitats for native plants and animals. In particular, these green roofs are very beneficial to the rare Black Redstart *Phoenicurus ochruros*. Over the last few years green roofs have become very popular, with many being installed in Germany, Switzerland, Sweden and the United States. Britain is now too joining this list of countries with green roofs.

John Box brought the conference to an end with his presentation on the green networks of Telford. The Borough of Telford and Wrekin has had a great deal of success with its green network and has achieved the government target, as mentioned by Dave Stone earlier in the day, of less than 1,000 people per hectare of LNR. Other areas such as Canterbury and Wakefield have also achieved this goal while some local authorities have made vast improvements such as Gloucester, Derby and Newcastle-upon-Tyne; unfortunately some local authorities are not improving, or even worse, are actually moving away from the target. The green network is of great importance to Telford and its residents as quoted in the Report on Telford Local Plan in 1992: *'The importance of the concept's environmental thread cannot be over emphasized: part of it comprises not just the retention of ecological and wildlife interest with its links via corridors, woods and open space to other areas, important as it is; but it also includes, significantly, the key to sustain the attractiveness of Telford itself, for residents, visitors and investors, as part of Telford's own investment in its future'. Telford's green network is comparable, but on a smaller scale, to that presented from Holland.*

IEEM 2005 AGM

Andy Tasker is the new President-elect:

Dr Andy Tasker, BSc DPhil CEnv MIEEM
Andy is the Chief Executive of the Warwickshire Wildlife Trust and its subsidiary, Middlemarch Environmental Ltd. He did his DPhil at York on ecological restoration of derelict land, has been a Senior Lecturer in Ecology at Coventry University for 10 years and an Exchange Professor in Wisconsin. Whilst Chief Executive he has developed the Warwickshire Wildlife Trust to over 13,000 members with a turnover of >£1 million and Middlemarch Environmental as a £1.5 million, UK–wide biodiversity consultancy. He is committed to developing professionalism in ecology and environmental management and keen for IEEM to support all ecologists, linking the UK base with Europe-wide opportunities.

The other members elected or staying in office are:
President, **Dr Chris Spray** MBE BA PhD CEnv MIEEM. Director of Environmental Science, Scottish Environment Protection Agency (SEPA).
Vice-President, **Dr Eirene Williams** BA PhD CEnv MIEEM. Eirene recently retired from the University of Plymouth and is the current chair of the Professional Affairs Committee.
Secretary, **Dr Janet Swan** BSc PhD CEnv MIEEM. Janet is currently director of RSK ENSR Environment Ltd.
Treasurer, **Dr Alex Tait** BA DPhil MIBiol CEnv MIEEM. Alex is the county ecologist for East Sussex County Council.

Council Members:

Mr Mike Barker	Principal Consultant, Entec UK
Mr Colin Buttery	Director of Parks and Deputy Chief Executive, The Royal Parks Agency
Dr Nick Carter	Director of Development, British Trust for Ornithology
Ms Karen Colebourn	Environmental Consultant
Mr Richard Graves	Principal Ecologist, Faber Maunsell
Mrs Jenny Neff	Director and Principal Ecologist, Ecological Advisory and Consultancy Services, Ireland
Mr Steve Pullan	Project Officer, DEFRA
Ms Pam Nolan	National Ecology Manager, Environment Agency
Dr John Rose	Senior Lecturer, Sheffield Hallam University

As IEEM has not recently produced an annual report other than a financial one, those not attending the AGM may lose the opportunity to keep up to date with IEEM activities. One of the features of the AGM is the annual report by the President, which in recent years has given an overview of the activities of the Institute, committee by committee.
The last year has certainly been active, and the points presented by Chris Spray are summarized below:

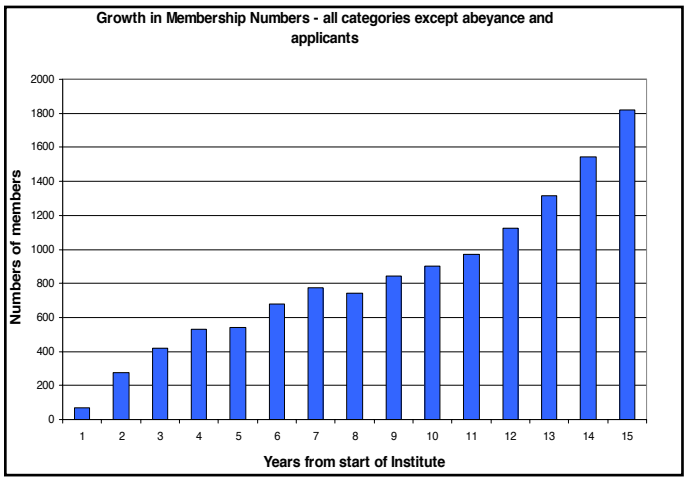
Council
- Council takes an overview of all the Institute's activities
- Budget
- Business plan
- Governance
- Approval of Code of Conduct procedures
- Approval of new Constitution-memorandum and Articles of Association
- Approves conference key decisions
- Approval of Disciplinary Regulations

Finance and General Purposes Committee
- Budget and income and expenditure monitoring
- Appointment of new staff
- Accommodation and extension of office space in Winchester
- Established a reserve account with the Ecology Building Society
- Agreed membership fees for 2005/06 – no increase
- Geographical sections – South West launch at the Bournemouth Conference.

External Affairs Committee
- The Society for the Environment has been the main focus of activities

– The Society's new Chairman is Prof. Peter Matthews
– The Society's new Chief Executive is Dr. David Hickie
- On-going liaison with EFAEP and contribution to three working groups dealing with education, policy and communication respectively
- *Flora locale* joint award for 'Go Native! Planting for Biodiversity'
- On-going responses to all relevant consultations (5 responses in 2004)
- Overseeing the website

Membership Admissions cCommittee
- Membership has reached ~2200 with membership in all categories continuing to rise
- Student membership is currently at ~5% and hoping to advance to 10%
- 691 applications for CEnv status were received
- The SocEnv grand-parenting process is now closed, future applications will be assessed by interview
- 546 new applications for IEEM membership have been received since 1 November 2004
- 4 new Fellows have been approved with a review of the Fellowship procedures
- 91 Upgrades have been processed
- 4 Portfolio applications have been processed
- 1 applicant was admitted by interview
- Paddy Coker, a stalwart of the Committee has unfortunately died



Professional Affairs Committee
- This is the main regulatory body of the Institute
- The updated Code of Professional Conduct was published and circulated to members
- Further Professional Issues Series are in preparation
- Disciplinary Regulations have been finalised
- The Guidance of Survey Methods document has been completed and is now available on our website
- The Environmental Impact Assessment Guidelines have been circulated for endorsement by the Countryside and Environment Agencies
- Compliance with CPD

Training Education and Career Development Commiittee
- Organised the professional development programme consisting of 55 courses attracting around 700 participants
- Organised two conferences (Southport and London)
- Responded to two consultations about the ecological skills issue (Department for Education and DEFRA)
- Meetings with BES and others on addressing the skills issue
- In the process of completing guidance documents for:

– Field taxonomy skills through different education levels
– Field taxonomy skills through different employment levels

Scottish Section
- The Autumn Open Day: 'Putting Farm Conservation into Practice' attracted 53 participants
- Five student events were held including talks and open days
- Three training workshops were held:

– River Survey Techniques

– Phase I Habitat Survey Techniques
– Protected Mammals in EcIA
• Membership increase from 178 to 230 members (10.1% of total membership)
• Representation (Scottish Native Woodlands Habitat Action Network and SNH)

North East Section
• Now in their 5th successful year
• Two main successes of the section:
– A successful, diverse and well-attended programme of events adding to North East members' CPD and IEEM's profile in the region
– Continued growth of regional membership, mainly due to events aimed at students and targeted employers (*e.g.* EN and EA)

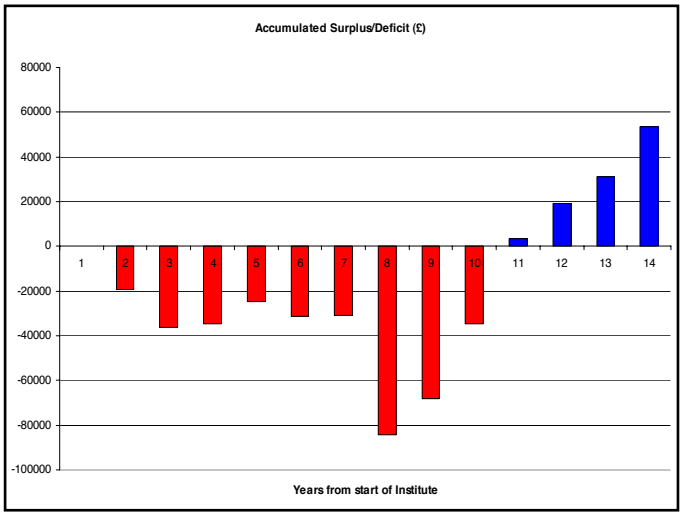
Shadow North West Section
• Following the Southport launch the section has held three events in its first year:
– 'A World Turned Upside Down'
– 'Bolton to Bold' (led by Prof. Tony Bradshaw)
– 'Bringing the Bittern Back to Leighton Moss' (joint event with RSPB)
• The section is hoping to become formally constituted during the coming year.

Shadow Irish Section
• The Section was launched in Dublin in January
• 100 delegates attended the first conference – Habitat Classification and Mapping
• Other activities include:
–Survey of Irish membership to establish how a geographic section can best serve its members (~50% responded)
–Contact with potential CPD providers to have some Ireland-based CPD events in 2006
–contact with relevant organisations to promote the work of IEEM and the benefits of membership

Report of the Secretariat
This is usually a much briefer report, most of the issues having already been covered in the President's Report. In his report Jim Thompson praised the work of the IEEM team in the Winchester Office. Linda Yost had started in the Institute in May as the Deputy Director and had been particularly involved with steering the group on the EcIA Guidelines, the Geographic Sections and the Disciplinary Regulations. Nick Jackson, had again managed the two main conferences and provided support for the conference in Scotland and the one in Dublin, both of which were very successful. He also put together the workshop programme, which its over 50 courses had attracted over 700 participants. Anna Thompson, the Membership Secretary deserved credit for processing the record number of IEEM membership applications together with the even larger number of Chartered Environmentalist applications in what had been a very exceptional year. Joel Bateman had left the Institute having made a considerable contribution to external affairs and especially the websites for IEEM and SocEnv and Jason Reeves had joined the team recently as Administrative Support. But all this work was not carried out by Institute staff alone – great credit was due to time and effort of the members of Council and the various Committees. Together there was a partnership, which had stood in good stead and he was sure, would continue to do so.

Report of the Treasurer
Alex Tait, the Treasurer led members briefly through the report, which had already been circulated to all members. The Institute had achieved a surplus of £22,237 compared to £11,903 for the previous year. The accumulated profits were now £53,535 and an account had been opened with the Ecology Building Society with an initial deposit of £25,000. This was part of the policy of building the reserve to a reasonable level and they were still less than 25% of turnover. The Institute was however in a much better position to respond to the needs of the members and to improve the services on offer. The accounts were adopted and the auditors, C.B. Heslop and Co. re-appointed.

Following the elections the meeting had a brief question and answer session before the President concluded the proceedings with thanks to all those concerned.



Is your email address up-to-date??

The Institute is using your email as a means of contacting you about Geographic Section activities, conferences and other events.

If you have changed your email please send your new one to enquiries@ieem.net

Society for the Environment

The last update on the Society was prior to the ending of the grandparenting period for admissions. IEEM members (surprisingly!) took little notice of the warnings that the grandparenting period was soon to end. 250 applications were received in September with 57 applications on the very last day, 22 of which were by recorded delivery! The total number of applicants via the grandparenting route was 691.This means that the processing, which is being done in order of application receipt, will be somewhat protracted and will probably not be complete until February. So please avoid the temptation to contact the office to see how your application is going! A number of applications for IEEM membership were received with simultaneous applications to be Chartered Environmentalists. These applications will be dealt with once Full IEEM membership is confirmed. But to have such a number of Chartered Environmentalists from IEEM is no mean feat and makes IEEM the second largest in terms of the number of admissions. Credit for this is again due to Anna Thompson who has co-ordinated the review process and also the reviewers themselves who have shouldered a mammoth workload - Peter Beale, John Box, Robin Buxton, Richard Graves, Steve Pullan, Janet Swan, Alex Tait, Claire Wansbury and Eirene Williams. The IEEM members who have been admitted as Chartered Environmentalists since the last *In Practice* are listed below:

CHARTERED ENVIRONMENTALISTS – Recent awards
Mr Richard Adams, Ms Alison Allen, Mr Bob Antonini, Mrs Judith Baker, Mr Martin Baker, Mr Andrew Barker, Dr Katherine Barlow, Mr Michael Batley, Dr Graham Bellamy, Mr Benjamin Benatt, Miss Alison Bennett, Miss Sharon Bracken, Mr David Broughton, Mr Allan Brown, Mrs Joanne Brown, Mr Colin Buttery, Dr Dolores Byrne, Mr James Byrne, Dr Helen Byron, Mr Rory Canavan, Mr Ian Cappitt, Miss Pippa Caswell, Ms Aebhín Cawley, Ms Ruth Chambers, Mr Adrian Chanter, Miss Clare Cheeseman, Mr Brian Chilcott, Ms Morwenna Christian, Mr Thomas Clark, Mr Alister Clunas, Mr Paul Cobbing, Mr Simon Colenutt, Mr David Collins, Mr John Comont, Miss Joanna Cornfield, Mr James Couzens, Dr Jonathan H. Cox, Mr Richard Crompton, Mr John Crossley, Mr Ian Crowe, Mrs Denise Daly Walton, Dr Thomas Dargie, Mr Oliver De Soissons, Mr Jeremy Doe, Mr Abel Drewett, Mr Neville Drummond Makan, Miss Clare Du Heaume, Mr Richard Dyer, Miss Helen Eastman, Mr Mark Eckstein, Mr Robert Edmonds, Ms Michelle Edwards, Ms Tracy Edwards, Miss Amanda Elliott, Miss Rosalyn Park, Mrs Alison Espie, Mr Roger Featherstone, Dr John Feltwell, Dr Philip Fermor, Mr Derek Finnie, Mr Maxwell Fraser, Mr Mathew Frith, Mr Peter Gateley, Dr Charles Gibson, Ms Emma Goldberg, Mr Peter Gondris, Dr Mark Gough, Mrs Nicola Green, Mr Paul Gregory, Ms Valerie Hack, Miss Rebecca Hall, Mr Andrew Harrison, Dr Rachel Hayward, Mr Andrew Heaton, Mr Francis Hesketh, Mr John Hiskett, Miss Anita Hogan, Miss Tanya Holdsworth, Mr David G. Holland, Miss Kate Hollins, Dr Stephen Holloway, Mr Alan Holmes, Mrs Joanne Honour, Mr Simon Hooton, Mrs Susan Hooton, Mr John Houston, Dr David Hubble, Dr Marion Hughes, Mr Philip Immirzi, Dr Richard Jefferson, Mr Peter Jepson, Mr Andrew Johnson, Miss Lorraine King, Dr John Knight, Mr Richard Knightbridge, Mr Thomas La Dell, Mr Jeremy Langford, Dr Glenn Langler, Dr William Latimer, Dr Edward Lawrence, Ms Claire Leather, Miss Abigail Lee, Mr Simon Lee, Mr Matthew Levan, Mrs Katharine Longden, Mr Derek Lord, Mr Frank Lucas, Mrs Hilary Ludlow, Miss Sarah Lyne, Mrs Siân Marta, Mr Jez Martin, Ms Julia Masson, Dr Andrew McLeod, Mr Andrew McIlwraith, Mrs Susan McLaren, Ms Sharne McMillan, Mr Ryan Mellor, Mr Colin Menendez, Mr John Messenger, Miss Helen Miller, Dr Ian Milne, Mr Charles Morgan, Mrs Fiona Morris, Miss Teresa Morris, Mrs Sally Mousley, Miss Lysbeth Muirhead, Mr Paul Murby, Mr Mark Naura, Mr Barry Nicholson, Mr John Newton, Dr John Palmer, Dr David Parker, Mr Julian Perrett, Mrs Vivian Phillips, Mr Alan Preece, Dr Sarah Preston, Mr Richard Pryce, Mr Neil Punchard, Mr Tim Rafferty, Dr Katy Read, Ms Louise Redgrave, Dr Glen Robson, Mr Richard Roe, Dr John Rose, Dr Sarah Ross, Dr Ian Rotherham, Dr Jonathan Russ, Ms Sarah Ryan, Mr Jorgen Schouten, Mr Alan Scott, Mr Paul Scott, Mr Jonathan Shelley, Mr Graham M.Smith, Ms Judith Smith, Dr Christopher Spray, Mr David Stanton, Mr Nicholas Steggall, Mr Glyn Stewart, Mr Anthony Stones, Mr David Stubbs, Miss Sofie Swindlehurst, Mr David Sykes, Ms Caroline Tandy, Mrs Alice Tree, Mr Stephen Trotter, Dr Jackie Underhill, Miss Claire Vetori, Dr Tim Walmsley, Mr Graham Walsh, Mr Hugh Watson, Miss Harriet Webb, Dr Mark Webb, Mr Michael Webb, Dr Charlotte Webbon, Mr David Wells, Mr Daniel Wenczek, Mrs Henriette Westergaard, Dr Robert Whitcombe, Dr Andrea Wilcockson, Mr Robert Wild, Miss Clare Williams, Mr Robert Yaxley.

The question is where does SocEnv go from here and how does is cross over from being a body which allows you to put CEnv after your name to something that will really make a difference to the way in which the voices of environmental professionals are felt? This is quite a responsibility for the Board, under its President, Peter Matthews and the new Executive Director, David Hickie.

Finally at the Annual Conference Dinner IEEM was pleased that both Will Pope the former President and Peter Matthews, the current President were able to attend.

Management Consultant Tauro-Scatology

This issue of *In Practice* sees our good friend Basil O'Saurus, everyone's favourite Professor of Tauro-scatology, embarking on yet another money-making wheeze.

What is it this time, Prof?

Nothing less than a complete change of career direction for me. I was renewing my car insurance a couple of weeks ago and the salesman asked me what my profession was. I said 'environmental consultant' and he said 'I don't have that on my list' and suggested 'management consultant' as an alternative (this part is absolutely true, by the way). I thought about it for a moment and thought 'why not' and straightaway doubled my day-rates.

Why?

Don't get me wrong: there's nothing wrong with being an environmental consultant. One of the great things is that when I deal with public sector bodies I always meet with kindred souls who have dirt from their last field trip under their fingernails and who wear ties as seldom as possible. And they are always complaining about reorganisations and the money wasted on management consultants brought in to oversee these. So, I did some research on the human ecosystem in public sector bodies and came up with a very interesting finding.

What is that?

I found that, two or three tiers of management above our tie-less, dirty-fingernailed environmental practitioners, there is always a middle manager who models himself on Michael Douglas in Wall Street and is just itching for ways to get an invitation to a hospitality tent at the next Test Match.

Why Michael Douglas?

Do the words 'Catherine', 'Zeta' and 'Jones' mean anything to you?

Enough said. Carry on.

Well, if I was going to get a big contract to reorganise a major public sector body, I thought that I needed two things: first, a hospitality tent at the next Test Match and second, a whizzy new management fad. And, after agonising for a few minutes, I came up with it.

Go on…

Have you heard of 'matrix management'?

Yes. It's a type of management used by some large organizations where large projects are organized with teams that work on a functional, rather than a project, basis.

Exactly; one hundred per cent management gobbledegook. But this model is far too simplistic for modern organisations. Think of a government agency trying to implement a major new European Directive – large numbers of people involved, lots of external contracts being let, wheels being re-invented all over the place.

I can't think of what agency or what Directive you are talking about, but go on.

In these situations, simple hierarchical management trees and even matrix management approaches don't work as there are just too many different types of lateral connection that need to be made. Every individual involved in the process needs to be kept up to speed on developments in all sorts of peripheral areas and, as a result, needs to keep several balls in the air at once. And this gave me the name for my new management fad.

Which is?

You are getting ahead of me. First, think of the organisation as a circle, with the staff arranged around the perimeter. Then draw a straight line between every pair of staff who need to keep each other mutually aware of developments in their own areas of expertise.

I tried that and quickly got a tangled web of lines between almost every pair of names around the perimeter. But how does this help me understand the name?

Simple. The circle. Straight lines connecting points on the perimeter. Keeping lots of balls from falling. Think back to your childhood. Open your eyes to 'Ker Plunk management'.

Obviously. Everyone doing their best not to lose their marbles.

Except, of course, at the end of the game everyone has lost their marbles. But I gloss over that part, at least until the contract is in the bag.

But, when you've forked out on the hospitality tent at the Test Match and got your lucrative contract, can you actually deliver?

Silly question.

Why?

Go to any of the big public sector bodies that employ IEEM members. Ask one of them if the management consultants who advised on the last reorganisation delivered. Ask if the reorganisation before that made any significant improvements. All you have to do is make it look as if it works until the Chief Executive either gets a gong or takes their undoubted management talents to an even bigger organisation. The next Chief Executive is bound to want to have a reorganisation of his or her own. It's a rite of passage for them. Any damage that you do will soon be forgotten.

Meanwhile, what about our dirty-fingernailed environmental professionals?

I wouldn't worry. The chances are that their management forgot to tell the consultants that they even existed. Just carry on as before.

Sage advice, as always, Prof. Thanks for your time.

Don't thank me. I'm a management consultant. The invoice is in the post.

Institute News

New Fellows
The Institute is pleased to announce no less than five new Fellows in the last three months.

These are Mrs Penny Anderson, the late Dr Paddy Coker, Ms Kathy Dale, Dr Richard Jefferson and Prof. Max Wade.

Penny Anderson established the consultancy of Penny Anderson Associates over 33 years ago and she is currently Managing Director. She has a Botany and Geography degree from Southampton and an MSc in Conservation from University College. She has produced numerous reports on a wide range of ecological and management issues extending well beyond her home territory of the Peak District. There she has worked extensively on the management of heather and *Molinia* in moorlands. Beyond that, her numerous reports include environmental impact assessment, habitat survey and evaluation, management for wildlife recreation and education, habitat creation, habitat translocation, habitat restoration, strategic planning of wildlife conservation, environmental education and interpretation and ecolocial research

Kathy Dale has an Honours degree in Ecology from Loughborough University and an MSc in the Biology of Water Resources Management from Napier College. She has worked extensively in water based issues including impact assessment, monitoring strategies, river crossings and diversions and habitat surveys. Until their last AGM she was the Convenor of the Scottish Section. She is currently an Associate in the consultancy – Northern Ecological Services based in Aboyne, Aberdeenshire where she has worked for over 10 years.

Prof. Max Wade recently joined Ecoscope Applied Ecology before its merger with RPS. He is currently the Managing Director. He has worked on wetland and freshwater ecosystems: vegetation and management, environmental impact assessment and the biogeography of plant invasions. He was previously Professor in Ecology and Head of the Department of Environmentall Science at the University of Hertfordshire and before that had worked at Loughborough University where he was the Director of the International Centre of Landscape Ecology. He has a substantial number of publications including journal papers and books.

Dr Paddy Coker was in the process of preparing his Fellowship application at the time of his untimely death. He had also become a Chartered Environmentalist and, on the basis of the material presented for that, there was no doubt that the Fellowship was fully deserved. He was a stalwart of the Membership Admissions Committee, and had published extensively on lower plants - bryology and lichenology. He was heavily involved with university courses as an external examiner and lecturer. In the last *In Practice* it was reported that a fund that was being set up in Paddy's name to purchase some land to be managed for conservation purposes and contributions from IEEM members were invited. This fund is still open but we have set a closing date of the 31 January for contributions from IEEM.

Dr Richard Jefferson has an MSc in Ecology from Durham and a DPhil from York and is a Fellow of the Royal Entomological Society of London. His interests include the ecology and management of semi natural grasslands, the science and practice of nature conservation, ecological succession and insect-plant relationships. He currently works for English Nature as a Senior Grassland Ecologist. It is very good to see this area of work given due recognition. He has just been co-opted on to Council.

This raises the number of Fellows to 18, a 25% increase in a year. But there are many other IEEM members whose contributions are well worthy of recognition as Fellows, so significantly more applications would be welcome. This is now more straightforward as you do not have to nominate yourself *i.e.* unless you want to, so modesty should no longer be a reason for holding back on your application.

News of IEEM Members
Members will be interested to know that the new Chairman of Natural England is Sir Martin Doughty. He is currently Chairman of English Nature and is also a Patron of IEEM – congratulations!

Steve Trotter, MIEEM has recently been appointed as Director of Conservation and Enhancement for the recently established New Forest National Park. He was previously with the National Trust in the Peak District where he managed their activities across 34,000 acres of the High Peak and Longshaw Estates.

Staff Changes
IEEM is pleased to welcome Jason Reeves as a temporary administrative assistant. Jason recently graduated with a degree in Biological Sciences from Reading University.

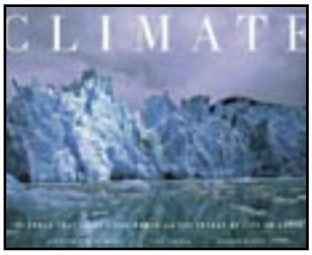
A New Section in the South West
Following a flyer sent to all members in the South West Region prior to the conference at Bournemouth a small group met and agreed to launch a new shadow section. The response had indicated general support for the creation of the section even though not that many were able to attend the actual meeting. The new shadow Chairman is Matt Jones supported by Mike Barker. This is the 5th Geographic Section to be created and no doubt more will soon follow. It is a sign of the maturity of the Institute and, from a purely practical viewpoint, could be a great help in achieving those often irksome CPD targets.

EFAEP
Institute News has included regular updates on EFAEP – the European Federation of Associations of Environmental Professionals. Just as IEEM deals with issues such as influencing national and international policy and SocEnv takes a wider view within an overall environmental context so EFAEP is faced with the same issues. Talk of having a seat at Brussels is one thing but achieving it is another. It is illuminating to see how well set up some of the organizations are within mainland Europe to lobby, for example the VDI (Association of German Engineers), which is the largest of the EFAEP members has its own offices and secretariat within Brussels to do just that. As EFAEP develops it will need to come to terms with these issues. On the more immediate practical front, EFAEP is preparing a Directory of Environmental Professionals across Europe, which will be open to all individual members of members EFAEP organizations. You will be able to input your own information onto the site. This may offer tempting possibilities but don't forget the Code of Professional Conduct and the bit about not making exaggerated or inaccurate statements! The Italian members are making great strides in getting this off the ground and it should be ready in the early part of next year. For those with an interest in EFAEP a visit to the website – efaep.org is well worthwhile. There is an on line survey on what members would like to see from an organization such as EFAEP, which although it appears to be past its closing date is still available for use and members are invited to respond.

Membership renewals
There is still a substantial number of members who have not renewed their membership for this year. Please attend to this right away as they were due on 1st October. Chasing up late payers seems to be a necessary pastime every year but is that really how you want your limited Institute resources to be used?

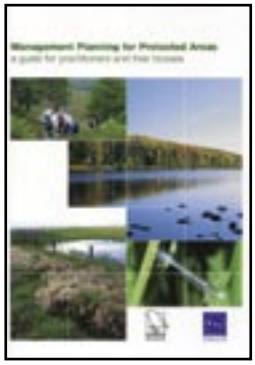
Code of Professional Conduct
Although the Institute has had a Code for some time and has sometimes had to take steps in dealing with complaints in relation to it, the procedures have remained largely unknown to members. The procedures for dealing with complaints and infringements have now been approved by Council on the recommendation of our legal advisors and will soon be circulated to all members. This is necessarily rather a dry and procedural document and so there will also be a more user friendly member's guidance note produced at the same time.

Recent Publications



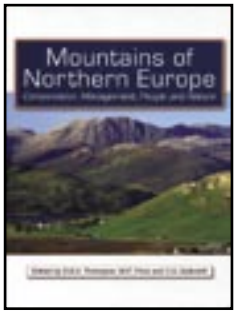
Climate: The force that shapes our world – and the future of life on earth
Authors: Jennifer Hoffman, Tina Tin & George Ochoa
ISBN: 1-4050-8782-X
Available from: Pan Macmillan
Price: £25.00

With a foreword by Monty Don, gardener and television presenter, on behalf of the Soil Association and written by a geophysicist, a marine biologist and a non-fiction writer 'Climate' aims to inform the reader of all aspects of climate. The book begins by asking if the climate really is changing. After it has been established that global climates are changing drastically the book goes on to outline the history of climates on earth beginning with the formation of the earth and the very first earth climate. It explains how climates work and how they have changed over time. The book also explores the connections between climate and life, and even climate and human culture. The vast majority of the book is dedicated to how man has changed the global climate, the current impact of a changing climate on the earth and man, the future of the planet and how a changing climate will affect different biomes in different ways, and what, if anything, we can do to limit climate change and its effect on ecosystems. This is an interesting, informative and well-illustrated book that is not just for ecologists and environmentalists but also for other non-science minded members of the public.



Management Planning for Protected Areas: a guide for practitioners and their bosses
Authors: E.T. Idle & T.J.H. Bines
ISBN: 1-85716-884-4
Available from: English Nature

The guide incorporates the five stages of planning for the management of a protected area. The five key stages are identified as: 1. Getting Started, 2. Identifying and Working with Key Stakeholders, 3. Agreeing Objectives and Work Programme, 4. Feedback and Review, and 5. Approving the Management Plan. Stage 1 involves what a management plan is, why one is needed, who will write it, and who will use it. Stage 2 identifies who should be involved in the preparation, how to begin the preparation, how preparation will be managed, the differences that stakeholders can make to the preparation, the time that should be used for preparation, and the area that is to be covered. Stage 3 sets out how to set objectives, what features make natural areas important, finding out about the history of the area, what the issues are and how to agree on them, what the solutions are, and what is required to be done. Stage 4 includes background considerations, what is to be reviewed and what decisions are to be made, the information that is required for these decisions, who will collect this information, who will analyse the information, and assessing the effectiveness of the work carried out. Stage 5 elaborates slightly on the approval of the management plan. The use of summary boxes and easy-to-follow flow charts makes this a well-written and user-friendly guide for anyone involved in planning for protected areas.



Mountains of Northern Europe: Conservation, Management, People and Nature
Edited by: D.B.A. Thompson, M.F. Price & C.A. Galbraith
ISBN: 0 11 497319 9
Available from: www.tso.co.uk
Price: £30.00

This is the latest publication from Scottish Natural Heritage's conference series entitled Mountains of Northern Europe: Conservation, Management, People and Nature and contains the updated and extended proceedings of the international conference on the mountains of Northern Europe held in Pitlochry, Scotland in 2002. It comprises 30 chapters in five parts. Part 1 is an introduction to the mountain systems of Northern Europe and activities prior to the United Nations' International Year of the Mountain in 2002. Part 2 details the many different aspects of mountain environments. Part 3 highlights the changes in the use of mountainous land regions. Part 4 covers management, practices and conflicts. And Part 5 outlines the future of Northern Europe's mountain systems. The book covers mountains in five countries, namely Norway, Sweden, Finland, Iceland and the UK, and has contributions from 80 authors. This is a piece of work that shows us that mountains are far more important to the future of the planet than most of us care to believe and that they must be sustainably managed in order to secure that future.

Life in the Undergrowth
Author: David Attenborough
ISBN: 0563522089
Available from: BBC Books
Price: £20

The accompaniment to the next instalment of David Attenborough's acclaimed television 'Life Series', dealing not only with the insects but also the other terrestrial invertebrates including scorpions, centipedes, mites, and spiders. This is the seventh book from that series and reveals with stunning images the world we rarely see and yet is all around us. We are treated to the bizarre and the violent in the struggle for existence that occurs in this miniature world. The book, like the television series, is divided into five main parts, namely 1. Invasion of the Land, 2. Taking to the Air, 3. The Silk Spinners, 4. Intimate Relations, and 5. Supersocieties. As always with Attenborough, this book is superbly written and magnificently illustrated.

Integrating Biodiversity Conservation and Sustainable Use: Lessons Learned From Ecological Networks
Author: Graham Bennett
ISBN: 2-8317-0765-X
Available from: IUCN

Uses eight defining examples to show how conservation and sustainable development can be achieved. These eight examples include the Baltic Ecological Networks of Estonia, Latvia and Lithuania, the Vilcabamba-Amboró Conservation Corridor through Peru and Bolivia, the Tri-DOM in the Congo Basin, the Far East Ecoregion in Russia, the Mesoamerican Biological Corridor in Central America, the Y2Y project in North America, the Terai Arc Landscape in Nepal, and the Green Wood in the Netherlands. The guide gives a brief review of each example and even includes information presented at the recent IEEM conference in Bournemouth.

In the Journals

Compiled by Jim Thompson and Jason Reeves

British Ecological Society

A.H. Fitter.
Presidential Address
Darkness visible: reflections on underground ecology.
Journal of Ecology 2005, **93**: 231-243.
This is the latest in the series of Presidential addresses from the BES – this time from Alistair Fitter. Because these addresses are generally a synthesis of the work and ideas of the individual involved it is almost impossible for a short summary to do them justice. Those looking for some CPD would do well to read the whole article! The final paragraph of the Journal summary is perhaps appropriate. '*What emerges from an attempt to relate biodiversity and ecosystem processes in soil is our extraordinary ignorance about the organisms involved. There are fundamental questions that are now answerable with new techniques and sufficient will, such as how biodiverse are natural soils? Do microbes have biogeography? Are there rare or even endangered microbes?*'
He quotes an example of the importance of arbuscular mycorrhizas where this symbiosis of plants and fungi is responsible for phosphate uptake in most land plants.
Specificity of the mycorrhizal interaction between plants and fungi could have important ecosystem consequences. One example would be in the control of invasiveness in introduced plant species: surprisingly, naturalized plant species in Britain are disproportionately from mycorrhizal families, suggesting that these fungi may play a role in assisting invasion. One of the papers reviewed in the last *In Practice* refers to their use in the control of *Poa annua* in golf greens.
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D. Carpenter and N. Cappuccino.
Herbivory, time since introduction and the invasiveness of exotic plants.
Journal of Ecology 2005, **93**: 315-321.
This Canadian report has clear general application. The authors undertook field surveys of herbivory on 39 exotic and 30 native plant species growing in natural areas near Ottawa, Canada, and found that exotics suffered less herbivory than natives.
For the 39 introduced species, they also tested relationships between herbivory, invasiveness and time since introduction to North America. Highly invasive plants had significantly less herbivory than plants ranked as less invasive. Recently arrived plants also tended to be more invasive; however, there was no relationship between time since introduction and herbivory.
Release from herbivory may be key to the success of highly aggressive invaders. Low herbivory may also indicate that a plant possesses potent defensive chemicals that are novel to North America, which may confer resistance to pathogens or enable allelopathy in addition to deterring herbivorous insects.
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H. Buschmann, P.J. Edwards and H. Dietz.
Variation in growth pattern and response to slug damage among native and invasive provenances of four perennial *Brassicaceae* species.
Journal of Ecology 2005, **93**: 322-334.
It has been suggested that release from natural enemies and pathogens results in higher vigour of invasive plants as a result of the selection of less defended but rapidly growing genotypes. The authors compared whether native and introduced provenances of four invasive *Brassicaceae* species differed in relation to grazing by the slug *Arion lusitanicus*.
In all species except *B. orientalis* they found significant but not always consistent differences in growth and reproductive characteristics between introduced and native provenances.
Contrary to expectation, there were no differences in the number of damaged leaves and leaf area consumed by slugs, or in the proportion of seedlings damaged and killed. Nor were there interaction effects between slug treatments and provenance.
The differences in growth between the native and introduced provenances would appear to be genetically based. In order to understand why some species become invasive, more comparative experimental studies are needed that investigate how different kinds of generalist and specialist herbivores and pathogens influence the performance of plants at different life stages.
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E. Cosyns, A. Delporte, L. Lens and M. Hoffmann.
Germination success of temperate grassland species after passage through ungulate and rabbit guts.
Journal of Ecology 2005, **93**: 353-361.
Dispersal of endozoochorous seed involves uptake by a herbivore and exposure to different kinds of digestive fluids during passage through the gastrointestinal tract. Assessment of the ecological significance of endozoochory therefore requires examination of the survival rate of seeds during this phase.
A feeding experiment was conducted with seeds of 19 plant species that are important constituents of temperate semi-natural grasslands and five animal species (two ruminants, two colon fermenters and a caecum fermenter). Mean retention time of germinable seeds was determined and seed characteristics that might affect germination success were examined.
Gut-passed seeds had a much lower germination success than non-gut-passed seeds either sown directly on dung or bare soil.
Relative germination success differed considerably between both plant and animal species. This may result from complex, herbivore-specific interactions between animal behaviour (chewing, digestion) and seed characteristics.
Germination success was positively related to seed longevity and also to seed mass and seed shape. Retention time of germinable seeds varied from c. 12 hours (rabbit) to 72 hours (ungulates), potentially allowing long-distance seed dispersal. This study highlights both the complex interaction between animal species and seed characteristics and the considerable differences in germination success of gut-passed seeds, which exist between plant species and raises the question as to the ecological significance of endozoochory due to the loss of seed germinability.
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H.H. Bruun.
Biological Flora of the British Isles no 225. *Rosa rugosa* Thunb. ex Murray
Journal of Ecology 2005, **93**: 441-470.
This is another contribution in this now celebrated series and deals with the Japanese Rose. This is widely used for landscaping and areas where a dense, prickly, barrier is useful. It is widely distributed in the British Isles but in mainland Europe appears to be confined to Holland, Germany, Poland and a circle around the Baltic and Scandinavia. This appears to be related to introductions for the species is naturalised rather than native. It is renowned among horticulturalists for its hardiness, great tolerance of frost, heat, drought and salt. It is reported as having spread along roadsides in Germany and Scandinavia as a result of its tolerance to road salting. The topics dealt with are the usual: geographical and altitudinal distribution; habitat; communities; response to biotic factors; response to environment; structure and physiology; phenology; floral and seed character; herbivory and disease; and history. This is a mine of information on this useful landscaping species.
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E. Fremstad, J. Paal and T. Möls.
Impacts of increased nitrogen supply on Norwegian lichen-rich alpine communities: a 10-year experiment.
Journal of Ecology 2005, **93**: 471-481.
This paper is interesting in the context of the much observed growth of lichens on trees and speculation as to the role of nitrogen in this. Species cover was tested during a 10-year fertilization experiment in the low-alpine *Cetrarietum nivalis* community and the middle-alpine *Phyllodoco-Juncetum trifidi* community in the Dovre mountains of south-central Norway. Nitrogen was added at 7, 35 and 70 kg N ha^{-1} $year^{-1}$, with the highest dose corresponding to approximately 3.5 times the annual deposition in south-west Norway.

Both communities are dominated by lichens (*Cladonia* spp. and *Cetraria* spp., respectively), and have a patchy structure. Lichens, which showed a decrease in cover and size, and after some years developed discoloured thalli, are the best organisms for monitoring changes in alpine vegetation that is exposed to increased nitrogen deposition.
Fertilization had no significant effect on the vascular plants (dwarf shrubs and a few graminoids) in either community, except for *Festuca ovina*, the cover of which increased slightly. Nitrogen pollution may affect oligotrophic, alpine communities differently, depending on their species composition and horizontal structure (patchiness).
It is suggested that other factors, such as climate, soil properties and community structure, may be more important than long-range nitrogen pollution for determining species composition and species cover in many of the oligotrophic, alpine communities in southern Norway. In lichen-rich communities, critical loads have already been exceeded in the most polluted areas of south-west Norway.
Correspondence: e-mail jaanus.paal@ut.ee

R.J. Mitchell, A.M. Truscot, I.D. Leith, J.N. Cape, N. Van Dijk, Y.S. Tang, D. Fowler and M.A. Sutton.
A study of the epiphytic communities of Atlantic oak woods along an atmospheric nitrogen deposition gradient.
Journal of Ecology 2005, **93**: 482-492.
This paper explores a related theme to the one reported above. Atlantic oak woods are of high conservation value and contain many rare lichens and bryophytes. The authors investigated the composition of Atlantic oak wood epiphytic communities in relation to atmospheric N deposition in order to identify N indicator species and propose a critical load for such communities.
The epiphytic communities of seven Atlantic oak woods receiving estimated total nitrogen deposition in the range 1053 kg N ha^{-1} $year^{-1}$ were surveyed. Exposure of epiphytes to atmospheric N over seven months was measured in terms of stemflow flux and concentration and airborne NH_3.
Redundancy analysis (RDA) related the species to stemflow chemistry and bark pH. Different groups of species were found at (i) a coastal low N deposition site (*Graphina ruiziana, Lecania cyrtella, Lobaria pulmonaria, Opegrapha atra, Orthotrichum affine, Melanelia fuliginosa* ssp. *glabratula* and *Pertusaria hymenea*), (ii) inland low N deposition sites (*I. myosuroides, F. tamarisci, Plagiochila atlantica, Cladonia chlorophaea, C. squamosa, Hypotrachyna laevigata* and *Thelotrema lepadinum*) and (iii) high N deposition sites (*Hypnun andoi, Hypnum cupressiforme, Calicium viride, Chrysothrix candelaris, C. coniocraea, Hypogymnia physodes, Parmelia saxatilis, Phyllospora rosei* and *Usnea subfloridana*).
RDA analysis showed that bark pH and concentration in the stemflow explained the greatest amount of variation in the species composition among the sites. The sites separated into two groups (low and high concentration) leading to an estimate for the critical load for N deposition for epiphytes in Atlantic oak woods of 1,118 kg N ha^{-1} $year^{-1}$.
Analysis of the occurrence of species against N levels suggested that *I. myosuroides* and *F. tamarisci* are indicators of small N inputs, whereas *H. andoi, C. coniocraea, P. saxatilis* and *H. physodes* are tolerant of increased N loads.
Different forms of N (, NH_3) were found to significantly affect the occurrence of different species. Some species were sensitive to total flux while others were sensitive to concentration.
Correspondence: e-mail rujm@ceh.ac.uk

J. A. Antos, H. J. Guest and R. Parish.
The tree seedling bank in an ancient montane forest: stress tolerators in a productive habitat.
Journal of Ecology 2005, **93**: 536-543.
I have included this North American paper because of the remarkable data on size and age in understorey individuals. Seedling banks, made up of small individuals of tree species in the understorey, are an important component of many forests.
The authors collected and aged 4,992 individuals up to 1.3 m in height of *Abies amabilis, Chamaecyparis nootkatensis, Tsuga mertensiana* and *T. heterophylla* from the seedling bank of an ancient forest in coastal British Columbia, Canada.
Growth was extremely slow. Some individuals < 1.3 m tall were more than 150 years old. Very few plants attained an above-ground stem length of 1 m in less than 100 years. Regressions of above-ground stem length vs. age indicated that net terminal growth averaged only c. 2 mm per year up to age 50.
Although species differed in age structure, all had slow-growing, persistent individuals. These trees can be considered to be adapted to survive for long periods under the high levels of biotically induced stress of the forest understorey. The seedling bank contributes to the canopy composition in ancient forests. Forest ecology must consider not only tree regeneration in relation to disturbance, but also the dynamics of tree populations under intact canopies.
Correspondence: e-mail jantos@uvic.ca

J. Schutten, J. Dainty and A.J. Davy.
Root anchorage and its significance for submerged plants in shallow lakes.
Journal of Ecology 2005, **93**: 556-571.
Submerged plants in shallow lakes are subject to pulling forces arising from waves, currents and grazing birds. Such forces can cause anchorage failure or breaking failure of the stems. Both lead to loss of fitness but uprooting is more damaging because many perennial species can replace broken shoot systems.
The authors measured the anchorage and breaking strengths of individual plants of different sizes of 12 abundant species (*Ceratophyllum demersum, Chara* sp., *Eleogiton fluitans, Elodea canadensis, Myriophyllum spicatum, Najas marina, Potamogeton natans, P. obtusifolius, P. pectinatus, P. pusillus, Utricularia vulgaris* and *Zannichellia palustris*) in 28 shallow lakes in the UK and the Netherlands.
Anchorage strength depends on the cohesive strength of the sediment and the size of the root system. The undrained shear-strength of sediments in shallow lakes varied more than 50-fold, but all were substantially weaker than terrestrial soils.
Breaking strength was a linear function of stem cross-sectional area in all species. Breaking stresses were comparable with those of marine algae and non-lignified terrestrial plants.
The results were used to predict the fates of four of the species when challenged with the largest waves likely to be encountered in a 10-year period, and the even greater forces exerted by grazing birds. Sediment strength and plant size determine whether plants break or uproot. A careful balance between investment in anchorage and in breakage resistance is needed to survive in the fluctuating physical environment of lakes.
Pulling forces experienced by aquatic plants are distinct from the mainly bending forces on more rigid land plants. Anchorage failure associated with the soft sediments of eutrophic lakes is likely to be a factor in the loss of macrophyte communities and an important factor in their restoration.
Correspondence: e-mail a.davy@uea.ac.uk

D.J. Metcalfe.
Biological Flora of the British Isles No 268 *Hedera helix* L.
Journal of Ecology 2005, **93**: 632-648.
Again it is very useful to see a complete review of this well known species. It is widespread throughout the British Isles except in the higher parts of Scotland and, on the European scale, is broadly present over the whole of Western Europe except Scandinavia.
The topics dealt with are again – geographical and altitudinal distribution, habitat, communities, response to biotic factors, response to environment, structure and physiology, phenology, floral and seed characters, herbivory and disease and history. Ivy seems to be hardy to a range of pollutants and a wide range of soils but tends to be limited to sheltered sites. It is much favoured by deer and sheep but not by gastropods. As usual with a paper in this series there is a substantial bibliography.
Correspondence: e-mail dan.metcalfe@csiro.au

J-F. Le Galliard, R. Ferrière and Jean Clobert.
Effect of patch occupancy on immigration in the common lizard.
Journal of Animal Ecology 2005, **74**: 241-249.
Immigration of the common lizard *Lacerta vivipara* is shown in this study to be differentially affected by patch occupancy. The study used a connected two-patch system that was manipulated over a one-year period. Two contrasting treatments were used, in the first treatment both patches were

initially occupied, and in the second treatment one patch was occupied whilst the other was not. Individuals were measured as yearlings, juveniles or adults.
Body growth and maturation of offspring moving into vacant patches were enhanced, whilst the condition of offspring moving into occupied patches was not different from residents. Intraspecific competition was probably the reason for the lack of difference in occupied patches whilst the lack of competition benefited those moving into unoccupied patches. The increased growth rate of juvenile females immigrating into unoccupied patches allowed them to reproduce earlier than those moving into occupied patches. These benefits may only be short term however, as these juvenile females tended to produce smaller, leaner offspring later in the summer that may result in a reduced offspring survival rate.
The probability of settlement was not affected by the occupancy or lack of occupancy of the patch but immigrating individuals were found to stay longer in vacant rather than occupied patches. Once colonised empty patches had a higher per capita growth rate than already occupied patches. This was due to continual immigration and because of higher reproductive recruitment. This increased growth of recently colonised patches may explain why the species has the capacity to colonise readily new habitats and, at the same time, maintain a widespread distribution.
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O. Krüger.
Age at first breeding and fitness in goshawk *Accipiter gentilis*.
Journal of Animal Ecology 2005, **74**: 266-273.
Early reproduction is associated with an increased probability of reproduction and thus increased fitness, however, early reproduction may also have increased species survival costs and thus delaying first reproduction may prove more beneficial in some instances. These trade-offs lead to the evolution of various life-history strategies.
From 1975 to 2004, a total of 74 female goshawks *Accipiter gentilis* in a 250 km^2 area of Germany were studied to determine the optimal age of first reproduction and the mechanisms that affect the costs and benefits associated with early and late reproduction.
Females that first reproduced at one year old were found to have a lower lifetime reproductive success and fitness. Females reproducing at 2-4 years old were found to have increased reproductive success because of delayed maturity. The optimal age of first reproduction was shown to be three years old. The most likely explanation for this is the fact that survival skills improve with age.
It was also shown that habitat heterogeneity had a major influence on the reproductive success of the birds. The cost to fitness for females in a low quality area was severely decreased whilst in high quality habitats they were not affected as seriously. For this reason there is a nonlinear selection pressure on the age of initial reproduction.
Population density was also a factor influencing whether or not females reproduced early or not. Females in high-density populations tended to breed later in their lives than those in low-density populations.The optimal age at first breeding would appear to be a trait affected by the cost and benefits of early reproduction but also influenced by habitat heterogeneity and population density.
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P.J. Wright and F.M. Gibb.
Selection for birth date in North Sea haddock and its relation to maternal age.
Journal of Animal Ecology 2005, **74**: 303-312.
Birth date can be important to lifetime reproductive success.
This study examined the relationship between maternal age, spawning time and early survivorship in the North Sea haddock stock. Temporal changes in egg production were compared with the birth date distribution of progeny surviving to the demersal phase in 1994, 1996 and 1999, when the age structure of the spawning stock differed.
Estimates of intra-annual variation in stock egg production indicated that first-time spawning two-year-olds began spawning much later than older age-classes.
The form and magnitude of selection on birth date varied between years, indicating that the production of multiple batches of eggs over an extended period has some adaptive significance to progeny survival.
Survivorship was consistently poor from the late spawning period when age two females contributed most to stock egg production. This persistent selection against late hatched offspring could reflect either low parental investment, as age two females produce smaller eggs, or the short length of the growing season prior to settlement.
Variability in birth date selection, particularly with respect to first vs. subsequent years of spawning, implies a strong selection pressure for a long reproductive lifespan. As such, reproductive potential in this and other exploited fish species with a similar reproductive trait may have been affected adversely by the general decline in repeat spawning females in recent years.
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R. J. Fletcher.
Multiple edge effects and their implications in fragmented landscapes
Journal of Animal Ecology 2005, **74**: 342-352.
Although a report from North America the principles discussed here have broad significance and relate to questions raised at the Bournemouth Conference on connectivity and corridors. Habitat edges are thought to explain much of the negative effects arising from habitat fragmentation; however, progress has been limited in extrapolating edge effects to different situations because ecologists still do not understand if and how multiple edges interact within fragments. It also remains controversial whether edge effects govern patch-size effects, such as area sensitivity, observed in many migratory songbirds.
The paper reports how multiple edges within fragments may intensify edge responses by investigating spatial distributions of an area-sensitive songbird that breeds in temperate grasslands of North America, the bobolink (*Dolichonyx oryzivorus* Linnaeus). The paper reports tests on whether bobolinks avoid edges and whether avoidance is stronger near two edges (double-edge plots) than near only one edge (single-edge plots).
Multiple edges appeared to influence the magnitude of observed edge effects, in which the probability of bobolink occurrence was four times lower in double-edge plots and two times lower in single-edge plots than in the interior of grasslands. Within single-edge plots, the probability of occurrence increased with increasing distance from edge. Within double-edge plots, the probability of occurrence increased as a function of the nearest and next-nearest distances from edges. Multiple edges also appeared to increase the extent of edge effects, or distance of edge influence
Extrapolating local bird distributions to landscape models suggests that edge effects can have strong influences on large-scale distributions and that models incorporating multiple edge effects are different to simple nearest-edge models only in highly fragmented landscapes, regardless of landscape composition. Furthermore, edge effects can lead to patch-size effects similar to empirical patterns of area sensitivity observed in this species. Edge effects can be intensified when multiple edges collide, a feature that permeates many fragmented landscapes.
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F. Mougeot, S.B. Piertney, F. Leckie, S. Evans, R. Moss, S.M. Redpath and P.J. Hudson.
Experimentally increased aggressiveness reduces population kin structure and subsequent recruitment in red grouse *Lagopus lagopus scoticus.*
Journal of Animal Ecology 2005, **74**: 488-497.
There have been several papers in this series, which form a useful background to understanding grouse population fluctuations. According to the 'territorial behaviour' hypothesis, red grouse population cycles are caused by delayed density-dependent changes in male aggressiveness influencing recruitment. These lagged changes in aggressiveness might be caused by changes in the kin structuring of male populations and differential aggressive behaviour between kin and non-kin ('kinship' hypothesis).
A population-level manipulation of male aggressiveness in autumn affected the kin structure of male populations, their subsequent aggressiveness, and recruitment of both sexes. On two moors, the authors implanted the old territorial cocks in autumn with testosterone on an experimental area (T-areas) and with sham implants on a control area (C-areas).
Increased aggressiveness in the first autumn reduced recruitment in that and the following autumns and breeding density of both sexes in the following two springs. Cocks on the experimental areas had bigger combs

(testosterone-dependent) than those on C-areas for at least 1·5 years after treatment, evidence that they remained more aggressive.
Increased aggressiveness reduced not only subsequent density but also kin structuring among territorial cocks. This supports the 'kinship' hypothesis that changes in the kin structure of male populations mediate year-to-year changes in male aggressiveness.
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J.G.C. Hopcraft, A.R.E. Sinclair and C. Packer.
Planning for success: Serengeti lions seek prey accessibility rather than abundance.
Journal of Animal Ecology 2005, **74**: 559-566.
For those of you going on safari in the New Year this study may help you in your search for lions!
Lions *Panthera leo* in the Serengeti have been found to distribute themselves with respect to hunting opportunities. The study was undertaken using data from radio-collared lions tracked over the past 16 years in an 1,800 km^2 area in the south-eastern part of the Serengeti National Park in Tanzania. Five habitats were used to measure the distribution: the view-sheds from large rocky outcrops, river confluences, woodland vegetation, erosion embankments and water sources.
On a broad scale lions move with the movement of prey species but at a finer scale (< 100 m) lions hunted in areas where prey was easier to catch rather than where prey was most abundant. Plain's lions chose erosion embankments, view-sheds from rocky outcrops and access to free water whilst woodland lions chose erosion embankments and woody vegetation. This study shows that it is not simply a case of preserving larges areas of land in order to conserve large predators but the composition of the habitat also needs to be taken into account.
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Serengeti lion

A.B. Gill.
Review: Offshore renewable energy: ecological implications of generating electricity in the coastal zone.
Journal of Applied Ecology 2005, **42**: 605–615.
There is now much interest in generating electricity from offshore renewable energy developments and these are currently being planned on a considerable scale.
This paper assesses the potential impacts (both positive and negative) of offshore renewable energy generation. Actual or potential environmental impact can occur during construction, operation and/or decommissioning. The number of published peer-review articles relating to renewable energy has increased dramatically since 1991. Significantly, only a small proportion of these articles relate to environmental impacts and none considers coastal ecology.
Construction and decommissioning are likely to cause significant physical disturbance to the local environment. There are both short- and long-term implications for the local biological communities. The significance of any effects is likely to depend on the natural disturbance regime and the stability and resilience of the communities. During day-to-day operation, underwater noise, emission of electromagnetic fields and collision or avoidance with the energy structures represent further potential impacts on coastal species, particularly large predators.
This review demonstrates that offshore renewable energy developments will have direct and, potentially, indirect consequences for coastal ecology, with these effects occurring at different scales. Ecologists should be involved throughout all the phases of such developments to ensure that appropriate assessments of the interaction of single and multiple developments with the coastal environment are undertaken.
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M. Søndergaard, E. Jeppesen, J.P. Jensen and S.L. Amsinck.
Water Framework Directive: ecological classification of Danish lakes.
Journal of Applied Ecology 2005, **42**: 616-629.
The European Water Framework Directive (WFD) requires that all European waterbodies are assigned to one of five ecological classes, based primarily on biological indicators, and that minimum good ecological quality is obtained by 2015. However, the directive provides only general guidance regarding indicator definitions and determination of boundaries between classes.
The authors used chemical and biological data from 709 Danish lakes to investigate whether and how lake types respond differently to eutrophication. In the absence of well-defined reference conditions, lakes were grouped according to alkalinity and water depth, and the responses to eutrophication were ordered along a total phosphorus (TP) gradient to test the applicability of pre-defined boundaries.
As a preliminary classification the authors suggest a TP-based classification into high, good, moderate, bad and poor ecological quality using 0–25, 25–50, 50–100, 100–200 and > 200 μg P L1 boundaries for shallow lakes, and 0–12·5, 12·5–25, 25–50, 50–100 and > 100 μg P L1 boundaries for deep lakes.
Most indicators responded strongly to increasing TP, but there were only minor differences between low and high alkalinity lakes and modest variations between deep and shallow lakes. The variability of indicators within a given TP range was, however, high, and for most indicators there was a considerable overlap between adjacent TP categories. Cyanophyte biomass, submerged macrophyte coverage, fish numbers and chlorophyll a were among the 'best' indicators, but their ability to separate different TP classes varied with TP.
When using multiple indicators the risk that one or more indicators will indicate different ecological classes is high because of a high variability of all indicators within a specific TP class, and the 'one out – all out' principle in relation to indicators does not seem feasible. Alternatively a certain compliance level or a 'mean value' of the indicators can be used to define ecological classes. A precise ecological quality ratio (EQR) using values between 0 and 1 can be calculated based on the extent to which the total number of indicators meets the boundary conditions, as demonstrated from three Danish lakes.
The analysis of Danish lakes has identified a number of useful indicators for lake quality and has suggested a method for calculating an ecological quality ratio. However, it also demonstrates that the implementation of the WFD faces several challenges: gradual rather than stepwise changes for all indicators, large variability of indicators within lake classes, and problems using the one out – all out principle for lake classification.
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D. Thompson, M. Lonergan and C. Duck.
Population dynamics of harbour seals *Phoca vitulina* in England: monitoring growth and catastrophic declines.
Journal of Applied Ecology 2005, **42**: 638-648.
Harbour seals *Phoca vitulina* in eastern England were heavily exploited in the 1960s and 1970s, and affected by phocine distemper virus (PDV) epidemics in 1988 and 2002. Information on their historical and current status is required for their management and in any such population survey errors need to be estimated and minimized.
Data are presented from annual aerial surveys of the population. Sporadic, synoptic surveys in The Wash, England, were used with more frequent counts of subpopulations in the Moray Firth, Scotland, to determine optimum timing of surveys.
Models were developed that explicitly account for variability in both observation and population growth processes to show that the proportion of animals observed is much more variable than the annual growth rates. The latter can therefore be treated as constant within each period, and estimated along with the epidemic mortalities during the study and the precision of the

survey results.
The Wash population increased at around 3.1% per annum (pa) between 1973 and 1988. It fell by approximately 52% as a result of the 1988 PDV epidemic, and subsequently increased at 5.7% pa. These growth rates were below those reported for European mainland populations, but showed no indication of density-dependent effects.
The recurrence of PDV in 2002 caused approximately 22% mortality, significantly less than the 1988 epidemic and less than half that in European mainland populations in 2002.
Combining sparse, systematic survey data with sporadic counts produced robust estimates of growth rates and epidemic mortality. The results indicate the value of even limited and sporadic survey effort for monitoring populations. The study has highlighted significant differences in both population dynamics and the severity of disease events between English and European harbour seal populations.
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A.R. Cannon, D.E. Chamberlain, M.P. Toms, B.J. Hatchwell and K.J. Gaston.
Trends in the use of private gardens by wild birds in Great Britain 1995–2002.
Journal of Applied Ecology 2005, **42**:659-671.
Wild birds are commonly observed in private residential gardens in Great Britain. However, little is known about how their use of this significant and increasingly important habitat is changing and how such changes relate to their population status.
Trends in the use of private residential gardens by wild birds in Great Britain were investigated using weekly bird records from 18,300 gardens over eight years.
It was shown that the use of this habitat is seasonal and cyclic, with the timing and regularity of its periodicity variable between species.
The authors evaluated the significance of the underlying trends in the cyclic reporting rates. Eighteen species showed clear trends, the three with the most negative year term parameter estimates being 'red-listed' as high conservation concern.
Examining correlations with national scale survey data suggested that garden reporting rates are related to general population trends in a number of species, including several of conservation importance. Other species exhibit important differences between national and garden trends.
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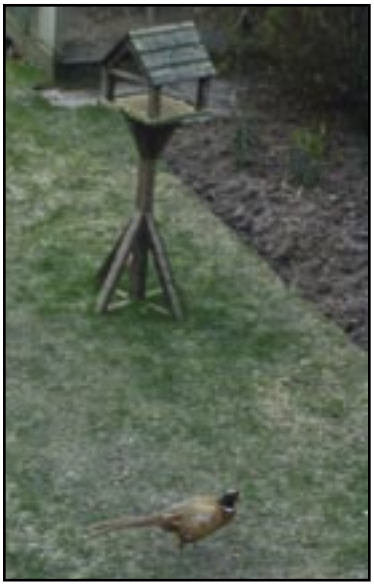

H.P. Creegan and P.E. Osborne.
Gap-crossing decisions of woodland songbirds in Scotland: an experimental approach.
Journal of Applied Ecology 2005, **42**: 678-687.
Recent declines in woodland birds in Britain have been linked to increasing habitat fragmentation. To understand the effects of fragmentation, data on avian dispersal across woodland gaps are essential but often lacking.
The authors used song thrush *Turdus philomelos* mobbing calls to attract songbirds across gaps ranging from 5 to 120 m in width and along comparable woodland edges.
Results from an area of central Scotland showed the chaffinch *Fringilla coelebs* and the robin *Erithacus rubecula* both responded more readily across gaps than through woodland. There was no difference between gap and edge response for the coal tit *Parus ater*, while the goldcrest *Regulus regulus* responded more readily along edges than across gaps. Maximum gap-crossing distances ranged from 46 m (goldcrest) to 150 m (chaffinch). There was a positive linear trend between mass of bird and the difference in the maximum response for gap and control experiments. Likewise there was a positive curvilinear relationship between wing area and the difference in probability of response between gap and control experiments at 50 m. These results may be interpreted in terms of manoeuvrability and ability to escape avian predation.
For the central Scotland landscape, the perceived number of patches in the landscape decreased exponentially with increasing gap-crossing distance, while the median patch size and mean patch fractal dimension increased linearly with gap-crossing distance.
The results show that an experimental approach using playback can be used to obtain data on avian gap crossing and the results applied to real landscapes to visualize interspecific differences in habitat perception. This has practical management applications, especially for designing forest habitat networks to maximize avian biodiversity, and potentially could help reverse the recent declines in woodland birds.
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M. Wolters, A. Garbutt and J.P. Bakker
Plant colonization after managed realignment: the relative importance of diaspore dispersal.
Journal of Applied Ecology 2005, **42:** 770-777.
Deliberate breaching of sea defences is frequently practised with the aim of restoring salt-marsh vegetation on previously embanked land. However, experience so far has shown that it may take several years before salt-marsh vegetation is fully established, and it is possible that limited diaspore (reproductive part) dispersal plays a role in this. In order to ascertain whether salt-marsh development may be constrained by limited diaspore dispersal, the authors studied the dispersal of salt-marsh species by tidal water.
From October 2001 to the end of March 2002 a total of 38 species, of which 18 were salt-marsh species, was trapped in a restoration site and adjacent marsh. *Aster tripolium, Limonium vulgare, Puccinellia maritima, Salicornia* spp., *Spergularia media* and *Suaeda maritima* were the most abundant salt-marsh species, with more than 3 diaspores m^{-2} trapped during the study period.
For most species, the number of diaspores trapped was representative of their abundance in nearby vegetation. Hence, despite the potential for long-distance transport by tidal water, the results indicate a predominantly local dispersal of salt-marsh species.
For the restoration of salt-marsh vegetation after de-embankment, relatively rapid colonization may be expected from pioneer and low-marsh species, provided they are present in a nearby source area and the restoration site is at the appropriate altitude. The establishment of species absent from the adjacent marsh may be dependent on the presence of birds or humans as the main dispersal agents. Breaching of sea defences should preferably take place before or during September, in order to take advantage of the peak in dispersal of salt-marsh species in the first year after breaching.
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Christmas and New Year

Members of Council, the Directors and Secretariat would like to wish all members a Happy Christmas and a productive and ecologically active year in 2006.

News in Brief

Go Native! Planting for Biodiversity Awards
Flora locale and IEEM staff have been impressed with the high standard of entries to the Go Native! Awards. Nearly 100 entries were received from Northern Ireland, Wales, Scotland and England with grassland and woodland projects featuring the most and community initiatives coming a close third. Throughout the winter the entries will initially be judged by a panel comprising of expertise from *Flora locale* and the Game Conservancy Trust. Later in the spring, carefully selected IEEM members will visit short-listed project sites to continue the judging procedure. Winners will be announced in early summer next year.

For more information please visit www.floralocale.org

New Planning Policy Statement (PPS9) from the ODPM
The new Planning Policy Statement on Biodiversity and Geological Conservation, which is still in the draft stages, from the Office of the Deputy Prime Minister, is intended to replace Planning Policy Guidance note 9 (PPG9), Nature Conservation published in October 1994. The new policies are based on the 2002 Defra publication 'Working with the grain of nature - a biodiversity strategy for England'. The new policies are based primarily on the old PPG9 policies but have been updated and place more focus on the need to conserve, enhance and restore biological and geological diversity.

For more information please visit www.odpm.gov.uk

Plans to Save the British Bumblebee
Syngenta Crop Protection UK Ltd. has set up Operation Bumblebee in an attempt to save various British bumblebee species from extinction. The scheme plans to create over 1,000 hectares of new habitat for bumblebees on arable farms by setting aside 1 hectare on each of 1,000 different farms that are to be sewn with an Operation Bumblebee seed mix in order to promote the insects' return. In doing so the scheme hopes to create 1 million hectares of arable farmland in the UK suitable for bumblebees.

For more information please visit www.operationbumblebee.co.uk

New Training Centre for Eastern Counties Farmers
A new training centre has been opened by Syngenta Crop Protection UK Ltd. in Whittlesford, Cambridgeshire. The Syngenta Centre for Environmental Excellence is hoped to provide farmers in the eastern counties with a valuable resource and allow them to learn the skills needed to successfully manage a farm in an environmental manner. Feature demonstrations at the new centre will include Operation Bumblebee mix establishment and management, wildflower mixtures, tussocky grass wildlife corridor, annual arable flora management, wild bird cover, farm woodland management, ditch management, and pond and wet woodland management.

The centre is hoped to help with the above-mentioned Operation Bumblebee project and in the future the group hope to open five more centres across the UK.

For more information please visit www.syngenta-crop.co.uk

Royal Botanic Gardens, Kew Awarded ISO 14001 Certification
The Royal Botanic Gardens, Kew have been awarded certification to the international standard for Environmental Management Systems (ISO 14001). Kew began preparations for the accreditation 18 months ago by setting up an environmental policy including waste management, carbon emissions, energy use, water use, prevention of pollution, environmental improvement and legal compliance for the entire organisation to follow. Kew is the first World Heritage Site to be awarded the certification.

A Helping Hand for Bitterns
The RSPB's Rye Meads nature reserve in Hertfordshire has used part of its £25,000 grant from the Hanson Environment Fund to release around 1,000 rudd (a small silver fish with orange/red fins) into the reserve's lagoon in order to provide additional food for the rare bird. There are less than 50 breeding pairs in England and the new food source along with reedbeds provided in the reserve should increase the bird's chances of survival in the future.

Massive Wind Farm Planned for the North Sea
The wind-farm developers Airtricity are in the process of designing a £16 billion 'super-grid' to be built in the North Sea. The huge wind-farm would connect 10,000 MW to the electricity grids of the UK, Germany and the Netherlands. This new plan would dwarf their current project off the coast of Ireland which generates 500MW and is at present the largest wind farm in the world.

For more information please visit news.independent.co.uk/business/news/article321517.ece

Beavers Reintroduced to England After Five-Century Absence
Six European beavers have been reintroduced to the English countryside after an absence of 500 years. The beavers, originally from Bavaria had spent six months in quarantine in Devon before they were released at the Cotswold's Water Park in Gloucestershire. The large rodents will initially be restricted to 15-hectare site but organisers hope that eventually these fences will be removed.

This is the second time beavers have been reintroduced to England. The first attempt in Kent in 2001 was unsuccessful when the animals failed to breed. The European beaver was once native to Britain but was hunted to extinction for its fur.

Scotland National Marine Park
Scotland could be the first country in the UK to have a Coastal and Marine National Park. A two-stage plan, overseen by a stakeholder group chaired by Ross Finnie (Scottish Environmental and Rural Development Minister), is underway to create a park somewhere in Scotland by the year 2008. Scottish Natural Heritage have been asked to identify a suitable park and will undertake a scoping and feasability study into its future creation.

For more information please visit www.scotland.gov.uk

Local Government Greening Communities Campaign
The Local Government Association (LGA) is planning to implement their Greening Communities Campaign in which they call for local authorities to create greener neighbourhoods by taking a holistic approach to the process by confronting a variety of environmental issues. The campaign is designed to allow local governments more freedom to pursue these goals and in doing so link up with surrounding communities so create a continuous linkage of cleaner and greener neighbourhoods.

For more information please visit www.lga.gov.uk

TAKE NOTE:

IEEM has a new email and website address –

enquiries@ieem.net

www.ieem.net

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 22nd January 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.

APPLICANTS FOR FULL MEMBERSHIP
Dr Benjamin R. Allen, Mrs Jane C. Atkinson, Mr Tim Bagwell, Dr Julia E. Baker, Dr Louise S. Bardsley, Mr Nigel B. Baskerville, Dr Victoria J. Bennett, Mrs Vicki Bloomfield, Miss Colleen Brown, Dr Paul A. Chapman, Miss Kim-Marie Clothier, Mr Jon Curson, Miss Karen A. Davies, Miss Katherine L. Dewey, Mr John C. Dobson, Dr Nicholas C. Downs, Miss Caroline M. Drewett, Mr Martin K. Fenn, Miss Moira Gallagher, Mr Henry E. Gallia, Ms Christine S. Hall, Mr Toby Hart, Mr Ralph N. Hobbs, Dr Mary J. Holmes, Mr Julian B. Hosking, Miss Lisa J. Huckstep, Mr Martin D. Janes, Mr Stewart J. Johnson, Ms Alison M. Jones, Mr Philip R. Kearney, Mrs Lesley Kelly, Mr David A. King, Mr Roy S. Leigh, Mr Richard J. Lockett, Mrs Suzanne Marshall, Mr Stuart J. McAleese, 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 Lyndon F. Roberts, Mr Daniel Ross, Mr Christopher J. Seabridge, Mr Anthony C. Seymour, Mrs Saya Sheridan, Ms Cecile E.M. Smith, Mr Adrian Spalding, Ms Alexandra C. Stewart, Mr J. Grant Stuart, Mr Pip S.H. Tabor, Mr Andrew J. Thorne, Miss Elizabeth T. Turley, Miss Caroline V. Vickers, Mr Henry J. Walker, Dr Jonathan E. Wentworth, Mr Richard J. West, Ms Susan E. White, Dr Lyn Whitfield.

APPLICANTS FOR ASSOCIATE MEMBERSHIP
Miss Claire L. Andrews, Miss Nicola A. Barnfather, Miss Juia G. Bastone, Miss Mary A. Beech, Mr Angus K. Beyts, Mr Charles S. Bradshaw, Mr James D. Brown, Mr William A.P. Brown, Mr Julius Bullo, Miss Elizabeth A. Carabine, Miss Nadine L. Clark, Mr Matthew H. Davies, Mr Joseph D. Deimel, Miss Anna-Marie Ford, Mr Marcus Fry, Mr William Gaudie, Miss Hannah Gibbons, Miss Hannah G. Gray, Mr Paul Hanson, Miss Jennie L. Harper, Mr Nicholas J. Henson, Mr Graham Hill, Miss Maria Hoggett, Mr Daniel Hone, Miss Catherine L. Jones, Mr James P. Lewis, Mr Adam J. Lockyear, Miss Nicola Marsland, Dr Louise McAbendroth, Miss Lila Morris, Mr Mark Morris, Mr Andrew C. Murray-Wood, Mr Keith R. Neary, Miss Lucy Philpott, Ms Victoria L. Pope, Mr Martin D. Pugh, Mr Micheal E. Quinlan, Miss Lois M. Read, Mr Jason M. Reeves, Ms Judith Roberts, Miss Naomi P. Scuffil, Mr Glen Shah, Miss Harriet R. Spray, Mr Garry C. Steele, Miss Michelle L. Waddicor, Miss Monica Wadey.

ADMISSIONS

IEEM is very pleased to welcome the following new members:

NEW FULL MEMBERS
Dr Patricia C. Almada-Villela, Mr Paul J. Arkle, Mrs Joanna M. Bagnall, Mr Richard S. Bennett, Ms Helen M. Bibby, Mr J. Ross Bower, Dr Polly L. Bown, Mrs Sarah J. Chimbwandira, Mr Paul E. Cobb, Mr Keith Cohen, Ms Louise Collier, Ms Judith A. Cox, Mr Barry C. Embling, Miss Sarah L. Faulkner, Mrs Stephanie M.M. Ferguson, Dr E. Maeve Flynn, Ms Shona Gentry, Mrs Flora Grigor-Taylor, Mr Peter E. Hague, Ms Caroline B. Hanks, Miss Kirsty Hutchison, Miss Rebecca Inman, Miss Annabel Keast, Miss Charlotte M. Lamble, Mrs Carol A. Littlewood, Miss Shirley J. Macgowan, Mr Richard J.C. MacMullen, Miss Orla C. Maguire, Mr Quentin F. Mair, Dr Daniela Mayes, Mr Graham D. Morgan, Mr Thomas L. Munro, Miss Patricia J. Neylon, Dr Elizabeth G. O'Beirne-Ranelagh, Mrs Monica J. O'Donnell, Dr Declan O'Mahony, Mr Dave Ottewell, Mr Jonathan Panter, Ms Nicola Penford, Ms Dawn A. Phythian, Mrs Cecilia M. Port, Miss Catherine L. Potter, Mr James R. Primrose, Ms Kate Proctor, Miss Kerry L. Rhodes, Mrs Nicola M. Rivers, Dr Derek G. S. Robeson, Mr James N. Russell, Mr Edward W. Senior, Mrs Janet Slattery, Ms Julia H. Stansfield, Miss Caroline A. Stewart, Miss Anita L. Stone, Ms Catherine Storey, Ms Lucy Sumsion, Mr Jeremy T. Taylor, Mr Benedict R.E. Thorne, Mrs Fiona L. Wells, Mrs Marian Wilby, Miss Corin K. Wilkins, Mr Matt P. Willmott, Miss Sue J. Wilson.

NEW ASSOCIATE MEMBERS
Miss Jennie E.C. Allen, Mr David Allen, Miss Catherine E. Anderson, Miss Lorna M. Bousfield, Miss Amaryllis C. Chaney, Miss Caroline Chipperfield, Miss Zoe Connolly, Mr Rafe N. Dewar, Miss Sally S. Eaton, Miss Marie S. Evans, Miss Marlies Fell, Mr Adam Fitchet, Ms Liza J.K. Hollinghurst, Mr Neil T. Ireland, Mrs Helen J. Jacobs (nee Crabtree), Mr Richard E. Law, Mr Todd R. Lewis, Mr Thomas B. McArthur, Mr Jamie McGilp, Mr Clive Mellon, Miss Rebecca K. Morris, Miss Laura Murray, Ms Ann T. O'Leary, Mr Colin M. Ormston, Miss Louise F. Pymm, Mr Oliver J. Ramm, Miss Fay L. Robinson, Dr Susan J. Rodway-Dyer, Miss Elizabeth J. Seal, Mr Michael D.C. Sharp, Dr Robert J. Simpson, Miss Sophie A. Smith, Miss Rebecca M. Tarry, Mr Matthew Tooby, Dr Sarah E. Toogood, Miss Jennifer M. Weaver, Dr Lisa Webb, Miss Elizabeth Wickens, Mr Graham Williams, Ms Sheila Wiseman, Miss Hannah L. Wood, Dr Sarah Yarwood-Buchanan

UPGRADES – Associate to Full
Mr James Baggaley, Mr Christopher Baker, Dr Jasmin A. Barwig, Mr Adrian Bliss, Mr James Davidson, Ms Eleanor Douglas-Hamilton, Mr Max E. Ellson, Dr Martina Girvan, Ms Estelle J. Linney, Mr Anthony A. Marshall, Mr Gareth Matthes, Miss Clare E. Rawcliffe, Mr David C. Sweeting

NEW AFFILIATE MEMBERS
Mr Owen Biggs, Ms Hannah V. Chivers, Mr Trevor D. Codlin, Mr Christopher E. Dogbey, Mr Simon D.J. Holden, Mr Cliff R. Pullan, Mr Jonathan A. Rhodes.

NEW STUDENT MEMBERS
Miss Melissa Barrett, Mr Grant P. Bramall, Miss Julia J. Burley, Miss Gail W. Cobbold, Mr Mike Dalton, Miss Katie L. Dawkins, Ms Lindsey Defew, Miss Helen M. Douglass, Mrs Michelle D. Graves, Mr Cornelius O. Itotoh, Mr Steven P. Johnson, Mr Bruce W. Keep, Miss Lisa J. Langley, Mr Neil C. Page, Mrs Sarah J. Patton, Mr Gil Proaktor, Miss Alison E. Reed, Miss Gabrielle G.F. Roy, Miss Anna V. Scott, Miss Rhona E. Scott, Miss Fiona J. Spiers, Miss Catherine J. Stanley, Mr Paul F. White, Mr Mark A. Whiteside, Miss Victoria L. Woods, Miss Yuan Zhong

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: 01654 705950, Fax: 01654 702782, http://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, http://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: Plastanybwlch@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, http://www.btcv.org

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11 January 2006. Woodland Management and Creation in the North Pennines. National Park, Hexham, Northumberland
An event organised by the NE Section. For more information please contact andrew.cherrill@sunderland.ac.uk

7 February 2006. Scottish Energy & Environment Conference. Thistle Hotel, Glasgow
Scotland's leading annual conference and exhibition devoted to all aspects of energy and environmental management. www.seecon.org.uk

7-9 February 2006. ENVIRO 2006. International Convention Centre, Manchester
A forum and business-networking event dedicated to the environmental technologies sector exploring sustainable innovation, growth potential and the future of the industry. www.enviro2006.co.uk/

8 February 2006. Power & Opportunity – BWEA 3rd Annual Marine Renewables Conference. The Sage, Gateshead
This British Wind Energy Association conference aims to highlight wave and tidal energy as a competitive, clean and secure energy source. www.bwea.com/marine/conference.html

9 February 2006. IEEM NW Section Event
'Strategic Environmental Assessment: Planning for biodiversity!' by guest lecturer Martin Slater (Planning Liaison Team Leader, Environment Agency) at the Wildlife Trust for Lancashire, Manchester and North Merseyside, The Barn, Berkeley Drive, Banber Bridge, Preston.
Following the lecture there will be an open discussion to consider the deveopment of the North West Shadow Section for 2006. You are warmly invited to this event.
To book a place please contact Paul Rooney on rooney@hope.ac.uk of 0151 291 3933

22-23 February 2006. Ecobuild 2006. Earl's Court Exhibition Centre, London
Designing and building a sustainable future. www.ecobuild.co.uk

23 February 2006. Environmental Risk Assessment for Contaminated Land. London
Held by CL:AIRE – Contaminated Land: Applications in Real Environments. www.claire.co.uk/events.php

27 February – 2 March 2006. European Wind Energy Conference. Athens, Greece
An event covering business, policy, science and technology for professionals, experts and exhibitors in the wind energy sector. www.ewec.info

1 March 2006. Surveying for Bats and Development - The Consultants Approach. Beckenham, Kent
A workshop aimed at those who would like to undertake, or advance their expertise in consultancy for developers with respect to bats. Part of the IEEM CPD programme.

3 March 2006. Environmental Quality Standards: Striking the balance between environmental protection and scientific credibility
Institute for Research on Environment and Sustainability Seminar Series, University of Newcastle-upon-Tyne. www.ncl.ac.uk/environment/news/events0506.htm

15 March 2006. Aerial Photo Interpretation (API) and Habitat Mapping. Wellington, Somerset.
For those with little ecological or primarily desk-based experience, not field skills. Part of the IEEM CPD programme.

15-18 March 2006. Padua 2006 - International Ecotechnologies Exhibition. Padua, Italy
The exhibition covers technologies involved in waste, water, compost, energy, and soil/air/noise monitoring and control. www.environmental-expert.com/events/padua2006/padua2006.htm#info

16 March 2006. Aerial Photo Interpretation (API) and Habitat Mapping. Wellington, Somerset.
Same as 15 March but aimed at people with more experience.

7-8 March 2006. Contaminated Land: An Introduction to Risk Assessment. Shrewsbury, Shropshire
A practical course held by Environmental Simulations International covering the fundamental principles and techniques of 'risk assessment' as applied to contaminated land assessment and remediation. www.esinternational.com/training/CourseDetail.asp?course_id=35

16 March 2006. Roads and Wildlife. Cardiff, Wales
A workshop aimed at raising the awareness of the basic background and current issues relating to roads and ecology. Part of the IEEM CPD programme.

22 March 2006. Farm Environmental Evaluation. Wooler, Northumberland
An event highlighting the key components of the Farm Environment Plan (FEP) and outlining the required standard so that participants can provide to their clients an effective and comprehensive service. Part of the IEEM CPD programme.

22 March 2006. Sustainable Control of Invasive Plants: A Catchment Scale Approach. Environment Agency, Newcastle-upon-Tyne
An event organised by the NE Section. For more information please contact andrew.cherrill@sunderland.ac.uk

23-24 March 2006. Trade-offs in Conservation: Deciding What to Save. Symposium at the Zoological Society of London
Resources for conservation are often very limited and difficult decisions have to be made about species and areas to be saved. www.zsl.org/london-zoo/whats-on/

For details of all IEEM Workshops contact Nick Jackson
Tel: 01962 868626; e-mail: nickjackson@ieem.net
or Website: www.ieem.net