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THE NEW FRONTIER: ECOLOGICAL MANAGEMENT IN EASTERN EUROPE

Paul Goriup, FIEEM

Tracts of radioactive wastelands, devastated forests, clouds of poisonous fumes, rivers of cyanide. Ethnic conflict, crumbling infrastructure, economic disaster and whole populations suffering chronic health problems and abject poverty. Corruption, sleaze, alcoholism and the new Russian mafia. In fact, there has never been a better time to be an ecologist practising in Eastern Europe.

The images that flash up on our television screens and appear in our newspapers are not exactly untruthful about the situation in the former Communist bloc. However, it is often difficult to find positive information to provide balance and perspective, bearing in mind that many of the environmental problems afflicting Eastern Europe occur (or recently occurred) in Western Europe. This article aims to demonstrate that the opportunities for ecological restoration and nature conservation in the region are enormous. Indeed, much of what is happening in Eastern Europe can serve as examples of genuine ecologically sustainable development for the West.

Where and What is Eastern Europe?

This is not the place for a history of the region, but it is important to provide some context for the present ecological challenges. Perhaps the most important point to realise is that the former Communist bloc was never monolithic: it comprised complex layers of political, cultural and economic inter-relations that the powers in Moscow tried (and ultimately failed) to coordinate by domination of the central planning system.

The former Soviet Union comprised the Russian Federation (itself a vast agglomeration of regions, provinces and even semi-autonomous republics peopled by a huge range of ethnic groups apart from Slavs) and its satellites. Some countries, especially

those in Central Asia like Kazakhstan and Uzbekistan, were created *de novo*, rather like the African states set up by the European colonial powers. Other countries, like Poland, the Baltic states, and former Czechoslovakia, came under Communist control only after the last war, but were not part of the Soviet Union. Yet others, like former Yugoslavia, Albania and Romania, had their very own brand of Communism, and often steered paths separate from Moscow. Ukraine, the largest country in Europe, had been a part of the Russian Empire and then the Soviet Union, and was thus under rule from Moscow for over 300 years. During this time, a systematic effort was made to wipe out all dissent as well as its language, culture and history.

All this "former" political geography marks a period of upheaval in Europe that began with the Solidarity movement in Poland in the mid-1980s and continues to the present day. Now, depending on where a country started from politically and historically, most are in various stages of a fairly clear pattern of development: fix the borders, democratise the government, set up a market economy, and integration with the European Union (as well as NATO). At the end of this road, people expect peace, prosperity and personal fulfilment: for many, in other words, Communism by other means.

If it was difficult to generalise about Eastern Europe as a single entity in the past, it is certainly impossible now. Some try to distinguish between "Central" and "Eastern" Europe (meaning chiefly EU accession and non-accession countries), or between "near" and "far" frontiers (meaning all of Europe except Ukraine and Russia). Others talk about "Central and Eastern Europe" or "Newly



Lake Yalpug, a liman off the Danube, is the largest natural freshwater body in the Ukraine and can serve as a major ecotourism location.

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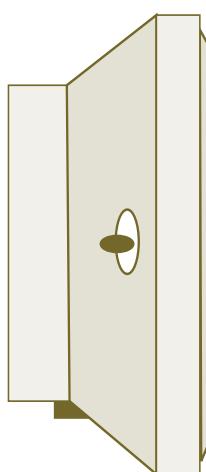
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In the Editorial to *In Practice* 30, I mentioned the American election and concluded that it was difficult to be optimistic about the result. This was shortly after the Hague Summit and I suppose that even if agreement had been reached with the outgoing Clinton administration, its chances of being accepted now look remote indeed. The position of the new administration has become clearer following a letter from the President to Senators Hagel, Helms, Craig and Roberts. Amongst other statements it included the following: "I oppose the Kyoto protocol because it exempts 80% of the world, including major population centers such as China and India from compliance and would cause serious harm to the U.S. economy. I do not believe that the government should impose on power plants mandatory emissions reductions for Carbon Dioxide which is not a pollutant under the Clean Air Act we must be very careful not to take actions which could harm consumers. This is especially true given the incomplete state of scientific knowledge of the causes of, and solutions to, global climate change and the lack of commercially available technologies for removing and storing carbon dioxide." The full text of the letter is available at <http://globalclimate.org/BushLetter.htm>. George Bush has now made it clear that the US will pull out of the treaty which was signed but which remains unratified by the Senate. With 4% of the world's population consuming 25% of energy it follows that even with the best intentions of the rest of the world, unless there is action from America, other efforts are likely to be severely limited in their effects. George Bush appears already to have realised many people's worst fears.

This whole editorial could have dwelt on the disastrous effects of Foot and Mouth Disease. But I cannot let it pass without emphasising the very difficult situation now arising for members concerned with survey work and any work requiring access to land. Ecologists are affected just as much as the more vociferous hotel and tourism industry for they, like the hoteliers, are unlikely to be able to make up for the shortfall caused by being confined to base. The new season will shortly be upon us and may well be over before the outbreak is under control. Developments dependent on planning consents which in turn may be dependent on survey results will have to wait. Biodiversity may be affected long term, certainly if there were to be fundamental changes in the traditional husbandry practice in places like the Lake District. And what of the many areas of conservation managed by sheep grazing? All of this is not to minimise the utter desperation which must be being experienced by many, many farmers. IEEM has written to a number of Ministers and the Agencies and others expressing the concerns felt by a significant number of members. Letters to the local MP from members can also help - the prospects for compensatory handouts do not look good but do point out that ecologists along with others are suffering considerably. There are views now being expressed that this outbreak will have far reaching significance for the sustainability of British agriculture and the future role of farmers where production is increasingly not at the top of the agenda. In due course there is an important debate to be had and one in which IEEM has a significant part to play.

Jim Thompson



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Independent States"; the EU has an aid programme for so-called Phare countries (those in the EU accession process) and another for non-accession countries, extending to Russia and Mongolia (mainly the post-Soviet "Commonwealth of Independent States", a masterly example of Communist euphemism since there is no common wealth and hardly any state independence). Government officials in Kazakhstan even claim it is a European country because it has a crumb of territory west of the Ural river delta.

The Danubian Nexus

From the foregoing, it is best that I focus on the three East European countries I know best: Ukraine, Romania and Moldova, and in particular their shared borders along the River Danube. Each of them has its own characteristics that makes the country unique. On the other hand, one can observe certain similarities relevant to ecological management that may (or may not) apply elsewhere in the New Europe.

On the Farm

The most striking feature of the countries, as soon as one leaves the capitals, is that they are deeply rural. After collectivisation, the villages are located on a grid-like pattern each accommodating from 2,000 to 5,000 people. Agriculture is the dominant economic activity. Each village was the headquarters for the state farm (kholkos) ranging from about 4,000 to 12,000 ha. Crops were sown and grown, and livestock reared according to schedules set by remote institutes and ministries (ultimately in Moscow). All the inputs (seeds, feed, chemicals, machinery) were supplied by the state, and the markets were controlled by the state. Similarly, the whole social infrastructure (school, clinic, shop, sports centre, cultural hall and so on) revolved around the kholkos. In effect, the head of the kholkos was a kind of feudal chief.

From 1990, the Communist governments were "reformed": today, all three countries are still ruled by members of the former "nomenclatura" or political elite. A grindingly slow and complicated process of land privatisation has seen the disbandment of the kholkoses, but also a total lack of government investment. Cash simply evaporated and was replaced by barter trade. The countryside is littered with decaying farm buildings and rusting machinery. Central planning and provision was replaced by poverty (average per capita income is less than £150 per year assuming wages are paid at all). Anything worth having was quickly stolen and the social support fabric collapsed.

Nevertheless, farming continued. Chemicals were the first item to be cut from the budget. Horse- and manpower returned to the fields to reduce fuel costs. Irrigation pumps were switched off (and the pipes removed for scrap) once the utilities began to insist on payment for electricity. Not surprisingly, yields fell dramatically. But the result is that the countries now have the largest stock of pre-qualified organic farmland in Europe, and external investment has started. In 2000, two farms in southern Ukraine alone gained European certification for 5,000 ha (the total area of land certified in Britain is 400,000 ha).

The consequences of this situation for promoting integrated environmental management and sustainable development are only just beginning to become apparent. In the West, meanwhile, political concern is less about the benefits of free trade in organic produce than about the feedback effect on high-input farms and future CAP structures as these countries approach EU integration. At present, the EU imposes a tariff of about £37 per tonne on imports of wheat.

Landscape-scale Approach

In a crowded country like Britain, intensive planning of areas measured in a few hectares is the norm for conservation management. This contrasts with the more spatially distinct zonation systems in East European protected areas where areas are routinely measured in hundreds of square kilometres.

For example, the Danube Delta Biosphere Reserve in Romania encompasses about 5,800 km² (the New Forest is about 260 km²). It includes a World Heritage Site and is designated as a wetland of international importance under the Ramsar Convention. The site is formally twinned with the neighbouring Danube Biosphere Reserve in Ukraine, which covers some 464 km². Between them, the reserves have designated over 540 km² as "core areas" that are simply set aside from any human use or even access except for scientific monitoring.

In June 2000, Romania, Ukraine and Moldova (along with Bulgaria) signed a Lower Danube Green Corridor Declaration that will extend even further the ecological restoration zones along the river floodplain. This includes over 250 km² of the Lower Prut Valley in Moldova, and 200 km² of new wetland protected areas in Ukraine.

On the other hand, the transformations of the landscape that have taken place in the Lower Danube region are equally immense and unusual in Western Europe. Whereas the landscape in Britain is to a large degree the sum result of mainly individual actions taken over the millennia, in the Lower Danube large-scale state-sponsored civil works in all three countries were carried out between 1950 and 1980 that changed the face of the area at a stroke.



Emissions from metallurgical plants at Tulcea, Romania: a significant source of pollution in the Danube Delta

Costing billions of pounds in current prices to execute, these works were part of integrated plans intended to provide irrigation water, establish forestry plantations and improve fish production. They included embanking the Danube, draining floodplains, controlling the levels of limans, changing saline coastal lagoons to freshwater reservoirs, constructing polders and setting up a network of canals to move Danubian waters around the system. The works were still in progress until the Communist governments collapsed. Although the idea of resuming them still arises regularly among the water engineering and farming lobbies, the environmental disruption caused by these schemes is now widely recognised and poses a challenge for long-term restoration ecology without parallel in Europe.

Meeting of Minds

During the 70 years of separation and competition (if not actual hostility) between capitalism and Communism, the people of Western and Eastern Europe have in general acquired noticeably different value systems and patterns of behaviour (amply demonstrated by the difficulties of social integration between west and east Germany). For example, the environmental movement in Eastern Europe was at the forefront of political protest and reform since it could be passed off as not fundamentally anti-Communist. As a result, Green parties are much stronger in East Europe than in the West, and ecologists enjoy a high social regard.

A western ecologist starting to work with colleagues in the east needs to be aware of the consequences of these differences, of which two will be most apparent. First, in the east there tends to be a corporatist or group approach to problems. This stems from the negative old regime attitude to personal initiative so no-one wants to accept personal responsibility for any decision or trying new directions. Ample communication and consensus-building is required in establishing positive relations.

Another hang-over is the role of scientific institutes, of which the former Communist countries took the view that three were always better than one. There were substantially more scientists per head of population than in Western Europe, including over 10,000 ornithologists and 50,000 fish biologists. These institutes and their scientific staff were organised in the classical disciplines (zoology, botany, geology etc) under the Academy of Sciences in an hierarchy from the Soviet Union down to national and regional branches. All the best researchers gravitated to Moscow who then organised the fieldwork done throughout the Soviet Union. Thus, in reality, the system became not much more than a data collection conveyor belt with all the interpretation and policy-making taken by the relevant Academicians in Moscow.

The good side of the system is that East European institutes tend to hold basic environmental data sets collected consistently for decades of the sort that West European academics only dream about. The bad side is that the data are rarely analysed or used for designing objective management measures. Furthermore, there is

a prevalent view that data collection is a perfectly justified end in itself irrespective of cost or any potential utility that the data may actually have.

Ecological Restoration and Sustainable Development

A British ecologist contemplating working in Eastern Europe will (apart from all the usual cultural adjustments associated with moving to a new country) have to be ready to shed preconceptions and take on board different approaches. Ecological management is much more akin to the planning and administration of English National Parks than SSSIs let alone National Nature Reserves. There is a socioeconomic dimension to be considered that does not feature highly in the Countryside Management System methodology. The countries are in economic and political transition, which means that legislation and authorities change constantly, often creating confusion and conflict.

Nevertheless, Eastern Europe also provides opportunities for innovation that would be difficult to attempt in the more rigid and institutionalised system of nature conservation that exists in Britain. For the last few years, I have been involved with one such initiative which will bring appropriate private investment to complement government and NGO efforts to restore natural areas and promote sustainable development.

FIELDFARE International Ecological Development was established as a private company in 1996 and became a public limited company in September 1999. It intends to utilise the resources of the ethical investment movement for promoting ecologically sustainable development and wise use of natural resources, especially in Eastern Europe. The basic business concept for FIELDFARE focuses on four main areas of investment activity:

- Management of land retired from agricultural or other uses aimed at restoring or creating biodiversity value combined with sustainable use of the resources so developed (e.g. grazing by local breeds of livestock, fuelwood lots, harvesting reeds, angling);
- Reducing the impact of intensive arable crop production by encouraging organic farming, and introducing alternative low-input crops (e.g. hemp and flax);
- Establishing centres for retailing ecologically friendly products and renting offices to local environmental NGOs (which will also help to identify investment opportunities);
- Fostering local businesses that use natural resources on a sustainable basis, or depend on such resources (e.g. low-intensity tourism) through forming joint ventures in which FIELDFARE will always maintain ecological control by owning a "greenshare" that prohibits the venture from adopting unsustainable operations.

At present, the company has 16 shareholders, including World Wide Fund for Nature - Austria (which also appointed a representative to the Board of Directors of the company). Their investment is aimed at small-scale sustainable business development in the Danube Delta region of Ukraine such as those described below.

1. Organic Vegetable Storage

The company evaluated agriculture in Reni district, as part of a wider project for restoring wetlands in a polder beside the Danube River (carried out by the EU Tacis programme and WWF). The purpose was to identify potential investments in sustainable agriculture as an economic off-set for the local communities concerned against any potential loss from operations in the polder itself. It was found that local people mainly grow market vegetables (principally onions and peppers), without using chemicals. However, they cannot store the produce so they are forced to sell at low seasonal prices (often to agents who do have access to storage and can transport the vegetables to markets during the high-price season). Accordingly, the company is making forward contracts to purchase the vegetables and provide transport to a store in Odessa.

2. Development of Ecotourism

In association with WWF and the European Centre for Eco-Agro Tourism (Amsterdam), the company prepared a preliminary strategy for improving the infrastructure for ecotourism in the Lower Danube Region, focusing on the extensive local protected area system. The main impediment for improving benefits for people living in or near the protected areas was shown to be the lack of local accommodation (for example, bed and breakfast hosts with the basic amenities expected by western visitors). As a result, the company has developed a proposal jointly with a local tourist company for training local householders in running B&B businesses, and assisting them to improve their properties. In addition, the company has purchased a building near the Danube boat station in the town of Vilkovo which will be renovated as an Ecotourism Information Centre.

3. Angling

Because of a long period of mismanagement and high nutrient inputs that encouraged algal growth, the wild fish stocks in the Danubian lakes had declined to a very low level by the mid-1970s. Stocking with exotic species commenced, and today the local fishery is dominated by grass and silver carp from China. However, these fish require high investments (especially electricity and food) for rearing fingerlings and, at the same time, command the lowest prices in the markets. Consequently, the fish economy is in depression and some rearing ponds near to Lake Kartal (a Ramsar wetland) are now abandoned. The company has devised a business plan with the pond owners to relandscape the site, to stock the ponds with game fish such as wels catfish and pike and to construct accommodation for anglers. The plan would not only provide much-needed employment and profits for local people, but also demonstrate the value of restoring the lakes to a natural state and regenerating the former wild fish stocks.



Collecting ice for the fish store from Lake Razim, Black Sea Coast, Romania. Traditional activities like this are still important features of local livelihoods in Eastern Europe

4. Biofuel Production

The Lower Danube region has considerable resources of renewable biomass (reeds, willow and poplar), yet at the same time has a fuel deficit which encourages felling of the valuable Danubian riverine forest. In cooperation with an American manufacturer of biomass briquettes, the company carried out a technical and economic study of the potential for producing fuel pellets from biomass, much of which could be generated from protected area management operations. The study indicated that while there were few technical hurdles and considerable ecological benefits from biomass pellet production (e.g. carbon neutral and maintaining healthy reedbeds), the likely prices in the local markets for such a fuel would be too low to generate a return on the investment required. However, there are opportunities for attracting development grants and exporting fuels to power stations upstream on the Danube.

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Cooperating with European local authorities on Nature Conservation issues.

Martin Cahn, MIEEM

The European Parliament has always seen exchanges of experience as a major instrument for building a united Europe. From beginnings in the early 1990s in small programmes called PACTE (for exchanges within the European Community) and ECOS and Ouverture (for exchanges with Eastern and Central Europe), it has involved local authorities in joint projects to look at how their opposite numbers do things. In typical paternalistic style it was assumed that the more developed regions would help the less developed, both within the Community and without. These were small projects in Commission terms with total budgets of the order 100 000–150 000 Ecu.

They offered elected members and officers the chance to see for real how other local authorities operate. Formal exchanges linked to town twinning may be less effective in achieving this since there is no real focal point of expertise. By contrast when exchanging experience over a concrete problem one is thrown into the detail of differences in practice and culture (both administrative and in the manner in which they understand the terms nature conservation, ecology and planning). In so doing one is made to re-examine the very bases of one's own practice and therefore form an excellent means of professional development. IEEM members working in local authorities and the voluntary sector should certainly consider the opportunities provided by such EU exchange programmes as a means to get a new outlook on their work.

The PACTE and ECOS programmes were taken over by the Commission in due course. In keeping with the Commission philosophy that large programmes are easier to manage, the programmes were changed and preferred budgets got bigger. More partners were involved and the financial budgeting got more and more complicated. They have been again replaced by the INTERREG IIIC programme which maintains the philosophy „big is beautiful”. Following the principle of subsidiarity, these are now managed at the national level rather than centrally from Brussels. We are still waiting to see how this new cooperation programme operates in practice.

Environmental issues, including nature conservation and natural land management, have always been one of the priority topics of these programmes. I mounted one successful bid, SPINE, for the PACTE call in 1995 which is an example of exactly the type of issues involved. This project, led by Cork County Council in Ireland involved four other partner local authorities: Mèze (F), Mühlhausen (former DDR), Pont-à-Celles (B) and Mid Glamorgan (UK). The objective was to compare methods of incorporating nature conservation issues into strategic planning. Following the Commission philosophy, the experience of Mèze and Bridgend ought to have been transferred to the others, but things do not work as simply as that and there was cross fertilisation with ideas in all directions. Such projects usually involve visits by officers or elected members to each of the partners to see the way they operate. In SPINE nearly all the visitors were officers, and this gave professional ‘ecologists’ a good chance to see their opposite numbers in practice.

One of the first things to consider is who indeed is an ecologist and what is their motivation for participating. Our French, German and

Belgian partners were small authorities with populations between 8 000 and 20 000. Hélène Goethals from Pont-a-Celles is a part-time general environmentalist (an eco-conseiller) for a village level local authority interested in involving local people in nature conservation. In the end she had little to learn on this topic and much to teach us, but she learnt a great deal about local nature conservation policy-making. Mühlhausen had no ecologist, but was supported by Edgar Reisinger, the ecologist from the Land of Thuringia who hoped to get sufficient political kudos from the project to establish a national park in Hainich Forest. In this he finally proved successful – the National Park was declared in 1998.

Mèze had no ecologist but the Mayor was a professor of microbiology. Their ecology was the very successful and high pressure promotion of *lagunage*, the treatment of sewage in open ponds by microbiological action. This had been adopted in the region and heavy pollution of the oyster fisheries in the Etang de Thau on the French Mediterranean coast had been stopped. But planning was opportunist and nature conservation wasn't really addressed as an objective in its own right. Ireland and Wales, with a common language and similar planning systems, understood each other well. They were looking for new methodologies for their planning. Bridgend learnt a great deal from the intense public involvement in Pont-à-Celles and the business and private sector approach to natural area planning in Germany. Cork wanted more statutory support to enable them to take nature conservation issues into more detailed consideration in their planning procedures. The active nature of planning involvement in nature conservation in other countries was new for them.

The results of all these exchanges are intangible and their benefits arise from changing people's mindsets and helping them to look at things without the preconceptions of their own legislation, administrative organisation and most of all their professional culture. How much of what we recommend as ecologists is moulded by what is the accepted wisdom among our fellow professionals?

Bolstered by two years experience in coordinating similar projects on energy issues for Energie-Cités, I put in two successful applications to other EU programmes in partnership with my new Polish wife. These were programmes for cooperation with Eastern Europe: the Baltic Small Project Facility and the Ecos-Ouverture Microprojects programme (both now closed). The first looked at Sustainable Tourism in the UK, Sweden, Lithuania and Poland and the second, CANDLE, was an exchange of experience between Bridgend in Wales and Suprasl in Eastern Poland looking at nature conservation planning and how to involve the public in cultural activity based on nature conservation. Out of all these authorities, only one, Bridgend, had a professional ecologist on the staff. In European authorities the Mayor and elected members have a much greater direct involvement in implementation and policy-making. Elected members from CEEC authorities always participated in the exchange visits whereas none from the EU authorities participated.



Polish visitors looking at the management of public open space for nature conservation in Bridgend.

This latter exchange threw up a series of examples of the cultural differences between working in Eastern Europe and the European Union.

Both local authorities had nationally important nature conservation resources, designated areas and nature reserves. But the consideration of nature reserves in the planning process was very different. Like most European countries planning in Poland is an architecture-led profession. Nature conservation is carried out by the designation of areas as nature reserves, landscape parks etc. Within such areas the management of land can be sophisticated.

However the management of non-designated areas presents a problem and the idea of using non-statutory designations was difficult for them to comprehend since designation was a statutory procedure and had to be regulated. The voluntary sector – for want of other powers, understood the idea of non-statutory designation well. The vibrant voluntary sector in Suprasl runs an annual festival, Uroczysko to promote nature conservation and culture and Bridgend was able to contribute to give it an international focus. Although Suprasl lies close to the major town of Bialystok, the idea of strategic planning for informal recreation in urban fringe areas been not been considered, but there again neither has it been considered generally as a policy objective by local authorities in most other EU countries.

So what can you get from participating in such a project and what advice can one offer to IEEM members considering mounting such a project?

Firstly try and get help with the mounting and coordination of the bid. The reporting requirements of the EU in particular are very onerous and frequently the reports have to be produced in a format designed to show that money was spent in conformity with the application form rather than for conveying information to a wider audience. It is therefore wise to take copious notes of the proceedings of meetings as excellent evidence for the reports. You do not want to spend your limited local authority time on this donkey-work. Leave the coordination to consultants and apply yourself to the specific local authority advice needed by your partners and the local organisation needed to welcome your guests where your effort is essential. However you will probably have to manage your finances directly and ensure that you have a competent, meticulous and pedantic accountant in your finance department. His report will get the most detailed attention of the Commission and obsession now can save heartbreak later on. And make sure he is covered by professional indemnity insurance.

Secondly, try and write a specific publication or output directly related to the exchange and ensure that you have **your own money** for dissemination once the project has finished. This way you will have a practical output of the project. What with contract delays by the Commission it is almost certain that you will not complete such a publication before the final EU report is submitted.

Thirdly don't try to impose your own professional boundaries in another country. The concept of an Ecologist and Environmental Manager may not even exist in your partner country but someone will be there to do the work. Remember that the founders of IEEM discussed at length the precise title to use when setting up the Institute because of all the cultural and administrative implications of the exact title within the UK. Between countries this problem is much worse. The professionals that do tackle the issues will have found a way, either more or less successful, of dealing with the issues concerned. But everywhere the most important issue will be whether the local authority officers or elected members responsible are committed to nature conservation issues or not. This is equally true in UK local authorities. Having in-house commitment is the key benefit provided by having our own specialist staff.

Fourthly, do not underestimate the time required for administration when you are preparing budgets. We spent twice the time budgeted on coordinating CANDLE and this did not include the time mounting the project which we did on a no success, no fee basis. It was worth every minute of it but if you are a consultant, beware of taking on an albatross.



Bridgend prepared a management plan for this riverside area next to the centre of Supra.

Finally participate fully in the social side and be courteous in front of elected members. The prime objectives of these projects are political. The officers are trying to learn, but also to acquire political kudos – perhaps to increase the exposure of some favoured nature conservation project or to get members to consider a new approach. You will learn more perhaps from the detailed visits and meetings with the practitioners but the political meetings are absolutely vital and should not be side-stepped.

The Commission still puts out calls for cooperation projects but the main opportunities for local authorities are now with the TACIS countries with which a Cross Border Cooperation programme is in operation (a call was just closing as this issue went to press). The voluntary sector however may participate in similar exchanges with the different CEEC countries funded by the Access programme. (Call deadlines differ according to country).

Martin Cahn MIEEM, MRTPI is an independent ecologist planner working from home in Poland primarily for Energie-Cités, an international association of local authorities based in Besançon, France.

A guide was produced by the SPINE project (available from martin@tf.com.pl) and a brochure was produced for CANDLE (available by snail mail from Suprasl on sekretariat@suprasl.com.pl).

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Environmental Impact Assessment (EIA) – application offshore.

Mick Green, AIEEM

Recent articles on EIA in In Practice have looked at revisions of the EU Directive and its impact on local authorities and developers. However the regulations implementing both the EIA Directives were made under the Town and Country Planning Regulations which are only relevant as far as the tide line. The Directives though, also apply to offshore developments and work assessing marine projects has been painfully slow.

Separate regulations now require EIA for offshore oil and gas developments and for aggregate extraction. It is almost certain that regulations will have to be brought forward requiring assessment for offshore wind (and other renewable) energy developments to comply with the Directives. It is a measure of the plethora of authorities and regulators once you move offshore that regulations are brought forward by different Government departments under different statutes. An overall approach to developments in the marine environment would be preferred if we are to take a more strategic approach to developments that could address problems such as cumulative effects.

EIA only became mandatory for companies wishing to receive development consent for offshore oil and gas installations in April 1998. Previously, although the EU Directive requiring EIA for large projects had been passed in 1985 (Directive 85/337/EEC), in the UK this had not been applied to any developments below the mean high water mark. Following lobbying by members of the Joint Links Oil and Gas Environmental Consortium (JLOGEC), who were concerned at the environmental impacts of offshore developments, the Directive was finally applied under the Offshore Petroleum Production and Pipelines (Assessment Of Environmental Effects) regulations 1998 (SI 1998 No. 968). These have since been partially updated to take account of the revising Directive 97/11/EC.

In a review of Environmental Statements submitted to the DTI by oil companies in support of applications for consent for offshore oil and gas developments The Wildlife Trusts / WWF UK Joint Marine Programme has found serious deficiencies.

While it is welcome that Statements are now being produced, the EIA process is making little or no difference to the environmental impact of the developments. None of the Statements reviewed made any attempt to show they were part of an overall process designed to reduce impacts. Apparently seen as an administrative hurdle to be overcome as part of the consent process, they appear to be produced to justify development designs produced on economic and engineering terms. Despite none of the statements even complying with the DTI's own best practice guidelines, development consent has been given to many of the projects involved.

The main areas of concern identified were:

- The statements did not show Environmental Impact Assessment as a process included in a 'cradle to grave' approach to developments. Statements were used to justify decisions taken before the assessment process was begun.
- None of the Statements contained proposals for post-auditing (monitoring) of actual effects against those predicted.
- Descriptions of alternatives considered were poor or missing, and details of why the proposed approach had been chosen were not clear.
- None of the Statements included a detailed survey of the species and habitats found in the area, including birds, mammals, fish etc, or a detailed seabed survey.
- When assessing the nature and magnitude of impacts the statements did not identify the source and/or cause of the potential problem; the receptor of the impact; the way in which the effect is transferred from source to receptor and the potential consequences, and the possible effects were not quantified.
- Mitigation measures were not described in all cases where environmental effects had been predicted.
- The predicted effects did not appear to be based on sound science and all claims were not substantiated.

Many of the shortcomings are not unique to hydrocarbon developments. Similar shortcomings have been found in a review of statements supporting applications for aggregate dredging (to be published shortly by The Wildlife Trusts / WWF UK). Neither are they unique to offshore developments. That the production of a statement is seen purely as a hurdle in the consent process has been noted in reviews of terrestrial developments, and the lack of post-auditing is also a common complaint. In other areas, such as the general lack of site survey, the statements were much weaker than those commonly produced on land. You wouldn't expect to get away with statements such as 'we think the site is mainly farmland', and yet we found the marine equivalent in several statements! The Wildlife Trusts / WWF UK do not see any reason why statements produced for offshore developments should be any less rigorous than those produced onshore. Indeed, given our lesser knowledge of marine wildlife and processes there is every argument for them being produced in a much more thorough and precautionary way.

Following discussions with the Department of Trade and Industry, who are responsible for licensing offshore oil and gas developments, the Department has now implemented changes to their guidelines for Environmental Statements. These changes cover many of the concerns raised in the review, and include emphasis on the need for a 'cradle to grave' approach; a need for full descriptions of alternatives with reasons for choosing the favoured option; improved description of mitigative measures and assessment of long-term or cumulative effects. The DTI has also announced that its inspectors will ensure that commitments made in environmental statements are enacted in practice. The Wildlife Trusts / WWF UK have welcomed the improved guidelines and intend to carry out a further review of statements in the future to see if the guidance leads to improved assessments.

The Wildlife Trusts / WWF UK hope that other Government Departments responsible for offshore developments will follow the DTI in tightening guidelines and best practice for Environmental Assessment. Ideally, there should be much more integration of guidance. The current sectoral approach to offshore issues means that the cumulative effects of, for example, fishing and oil and gas developments on a habitat is not assessed. A more integrated approach would lead to improvements in both assessments and environmental protection.

Copies of the report are available by contacting author at mick@gn.apc.org. Details of the DTI Environmental Assessment Guidelines are on www.og.dti.gov.uk

Mick Green, AIEEM is Marine Policy Officer with The Wildlife Trusts.

Foot and Mouth Disease

Will Manley, MIEEM

Whatever our livelihoods we are all too well aware of the widespread outbreak of Foot and Mouth Disease in the UK. The effects on farmers are clearer, the consequential effects on related industries; including hauliers, abattoirs, livestock auctioneers less so. Additionally, a large number of other 'less connected' businesses, individuals and organisations are now also being directly affected by the range of restrictions that are in place, either by regulation or by request. This also includes ecologists who need to get onto farmland to undertake surveys. Many of these require access to private land and/or are reliant upon using the Public Rights of Way network.

Great Britain is now subject to The Foot-and-Mouth Disease Declaratory (Controlled Area) Order 2001 and equivalent legislation in Scotland establishing a "controlled area". Statutory powers are now in force to restrict entry onto farmland and to close PROWs. The former is relevant to specific areas where FMD infection has been confirmed, the latter has been enforced by a majority of Local Authorities.

Access to farmland, for example, for ecological surveys can be undertaken in most areas with the owners permission. However, under the present circumstances it is unlikely that permission will be easily given. A responsible and professional position would, I suggest be that for the present, IEEM members keep away from farmland. We also at the Royal Agricultural College are inevitably affected, including our research programmes that include farm and farmer survey projects. It is the least we can all do to demonstrate a responsible and supportive response to this emergency.

The virus itself can survive under normal conditions for a maximum of 28 days. Survival in soil and slurry can be considerably longer. The critical point here is that at the point where MAFF are satisfied that there are no more new incidences of FMD, it will be at least another month before restrictions are reduced. At the time of writing in the first week of April, there are over 1000 confirmed incidents widely spread out throughout Great Britain with hotspots in Cumbria, the Borders, the North East and Devon. It is impossible to predict the outcome, but it is unlikely that farmland access should be relied upon till well into the summer at the soonest. Let's also hope for a period of hot and dry weather rather than cold and moist conditions that favour the virus!

For further and updated information the following websites from MAFF and Farmers Weekly are respectively, www.maff.gov.uk/topweek.htm and www.fwi.co.uk. In addition, MAFF have a helpline for general advice; 0845 0504141.

If access to farmland and open country is essential, the following general advice from MAFF is as follows:

PRECAUTIONS TO BE EXERCISED BY PEOPLE WORKING IN THE COUNTRYSIDE

Before visiting a farm/farmland you should consider:

- If your visit absolutely essential?
- Appointment or visits should be rearranged or arrangements made over the phone, by fax or email.
- You will be required to follow strict cleansing procedures which could include leaving your vehicle outside the farm, disinfecting boots, and wearing boots or clothing supplied by the farm.
- Do not allow children to accompany you unless absolutely necessary and they too must disinfect to the required standard.
- You will be required to disclose any previous contact with other livestock.

On the farm

Whilst on the farm, visit only essential locations. Visit stock only if absolutely necessary and ensure you have the owners permission. Do not wander round buildings. If it has not been possible to contact the owner beforehand, delay the visit.

Take responsibility for your own actions whilst visiting farms and ensure the highest standards of personal disinfection and cleanliness is carried out at all times. Arrive on the farm clean. Wear a material that can be cleansed and disinfected. Ensure that your vehicle is kept clean.

Leaving the Farm

- Ensure that all mud, slurry or manure is washed off **before** leaving the premises.
- Disinfectant (and water if needed) should be carried in vehicles at all times. (Health and Safety guidelines will apply).
- Apply disinfectant after washing.

Spraying is the most effective method, not forgetting tyres and the underside of the vehicle. Spraying should be undertaken even if there is a wheel dip or disinfectant mat in place. Concentrated disinfectant may be caustic and required protective clothing to be worn. Always check label first.

Once the vehicle is clean consider personal cleaning and disinfection. Ensure all clothing and boots are disinfected before they are put into the vehicle. A foot dip or spray should be provided.

Disposable items should either be left on the farm or sealed in a plastic bag. They will be disposed of by burning.

It is essential that all visits to farms and possible contact with animals are recorded. Should disease occur on a farm then these records will be used to trace movements and possible spread of the disease. The records should include the date and time of visits.

Will Manley MIEEM, is Countryside Management Research Consultant, Royal Agricultural College

Foot and Mouth Disease - Note from the Secretariat

The secretariat has been contacted on frequent occasions recently by members who are quite rightly concerned about the effects of the disease on ecological work. In many areas, access to land is restricted if not prohibited and the survey work in agricultural areas which would normally be taking place this year has been curtailed or put off. IEEM members who are licence holders will have received notification of changes from English Nature and other Agencies. Council is most concerned about this disease on the profession and letters have been sent to the politicians most closely involved with these issues in England, Scotland, Wales and Northern Ireland. The Statutory Agencies have also been circulated. In addition separate letters have been sent to all Patrons. The purpose of these letters is to bring to the attention of ministers and others the difficulties currently being experienced by some members. Whilst this may have financial implications for some, it is equally frustrating for others knowing that work needs to be done but without the means to achieve it. There is widespread concern about the health of the rural economy and, in particular tourism and allied industries, but the effects on other activities in the countryside are also serious and this was a further purpose of the letter.

Finally it is suggested that all members who are adversely affected or who recognise threats to biodiversity in their area write to their local MP to raise awareness of the problem. In the unlikely event of any compensation being payable, it would be very useful for members to make sure that their records are available and that they are able to identify any loss of earnings which may have resulted.

IEEM PATRON'S LECTURE

ECOLOGY AND THE REALIZATION OF A RURAL RENAISSANCE

Professor Charles Gimingham

University of Aberdeen

INTRODUCTION

I am sure we all agree that now, of all times, some form of rural renaissance is essential. Things are patently not going well either for the rural community, or for the environment and wild life. Farmers, foresters, sportsmen and landowners all tell much the same tale, and all around us we see losses of habitats such as native woodlands, heaths, bogs and species-rich grasslands, and alarming declines in some categories of biodiversity. To quote Lister-Kaye (1994) "On the land the legacy is a sorry tale which appears to have escalated faster in my lifetime than in the whole of recorded history". Whether seen from an economic, sociological or environmental standpoint, there is virtual unanimity in the view that some form of rural renaissance is overdue. The main point I want to put across is that this cannot be brought about by injections of cash alone (welcome as they would be), but demands a fundamental change of direction and attitudes towards the use and management of the countryside, involving both the rural communities and the expertise and influence which we as applied ecologists can offer. This, in essence, is what this conference is all about.

It is certainly a huge task and responsibility, especially as we have to accept that after a period in which 'ecology' became almost a household word and the environmental movement a force to be reckoned with, some of the steam seems to have gone out of it. We have to rekindle the flame, and towards the end of this talk I want to offer some thoughts on how a rural renaissance, nurtured by applied ecology, might be envisaged as a practical possibility. But to get to that point, it will be helpful to go back in time to the origins of ecology in this country, to examine the attitudes and aspirations of some of the pioneers; and then to explore very briefly how the subject progressed, what has been achieved, and where we should now be aiming.

In so doing, I will illustrate some of the trends by reference to my own special interest—the origins, use and management of heathlands and moorlands.

ORIGINS OF BRITISH ECOLOGY

Perhaps it may not be known to everyone that, as far as Britain is concerned, ecology – as a consciously new and distinctive approach to biological science – first began to emerge here in Scotland almost exactly 100 years ago, so it is very appropriate that this meeting is being held in Scotland at the turn of the century. The term 'ecology' was coming into use towards the close of the 19th Century, and among the first to adopt it were members of a small Department of Botany in Dundee University College, where the Professor was Patrick Geddes, whose name you may scarcely have heard of in this context. He was not only a botanist but also a zoologist, geographer and later a town planner and

sociologist. He was appalled at what he described as the 'intellectual torpor' into which the teaching of botany had slid, and he did much to revive it by enthusing his students with the need to find out how organisms live in their natural environments – i.e. ecology. In particular, he inspired two students, Robert and William (W. G.) Smith, to set about finding out how the various climatic and soil regimes in Scotland have led to the development of plant associations, and to begin the study, classification and mapping of vegetation. In other words, their ecology was a holistic discipline, looking for a synthesis of the many factors influencing vegetation and fauna, not excluding people. Indeed, Geddes was so imbued with the holistic approach that he quickly moved away from biological ecology and turned to what we now call human ecology and interactions of people with the built environment, particularly architecture and town planning. But his students continued as pioneers of vegetation science and saw it very much as an applied science of potential practical value in reaching informed decisions on questions of land use (e.g. in forestry), and for purposes of recording and understanding change in the landscape.

What happened next? Sadly, Robert Smith died at the early age of 26 in the year 1900. His work was continued for a time by his brother and others in the group, but the momentum for vegetation survey declined. In part this was due to the rapid growth of ecology as a rigorous scientific discipline seeking to establish cause and effect and to investigate the dynamics of natural systems. To my mind, it was essential to move to this more reductionist and experimental approach if the science of ecology was to progress. Ecosystems are highly complex subjects of investigation, and for a start need to be divided up into component parts, to make it possible to focus on separate environmental factors in determining the distribution and functioning of organisms. It was hardly surprising that at first ecologists concentrated on natural or semi-natural habitats where the complicating effects of human influence could either be ignored or treated as a category of environmental factors. Leaders like A. G. Tansley have been blamed for causing British ecology largely to ignore the human dimension in ecology, though this is not entirely fair as Tansley was fully cognisant of the importance of the influence of human activity on British vegetation. Indeed, he was the originator of the ecosystem concept and hence did have a holistic approach, although at the time (1938) so little was known of the interactions within and between ecosystems that they had to be taken apart before any significant degree of synthesis could be achieved.

Another consequence of these tendencies was that the emerging conservation movement concentrated on 'rescuing' examples of natural and semi-natural systems – i.e. on site safeguard. Again this was probably inevitable in view of the rapidity with which they were being destroyed, but it diverted attention away from the real threats to biodiversity which were developing in the rest of the countryside.

While there is still so much to explain and understand, modern ecology must remain largely reductionist and experimental. However, recent technology has re-opened the possibility – indeed the need – for synthesis and for a holistic approach. The ability to handle large bodies of quantitative data, to undertake multivariate analysis, and to set up elaborate models, now makes it possible to begin to achieve what the pioneers dimly envisaged: to interpret the interdependence of environment, vegetation, fauna and people on a large scale, in fact on the landscape scale.

In this context, the potential applications of ecological science in initiating rural renewal become apparent. However, before further developing that message it may be helpful to illustrate some of the trends to which I have just referred, using as an example the progress of work on heathland and moorland ecology.

HEATH AND MOORLAND ECOLOGY – ‘A CASE STUDY’

The holistic approach of the pioneers was well shown as early as 1902 in a paper by one of the Smith brothers (W. G. Smith 1902) on the origin and development of heather moorland. Here was an important and valued component of our landscape, the origins of which could convincingly be traced to human influence through forest clearance, while management by means of grazing and burning was largely responsible for its maintenance.

During the first half of the 20th Century, excellent descriptive accounts of heaths and moorlands made correlations with aspects of climate and soil possible, while peat stratigraphy and pollen analysis led to better understanding of their history. The successional dynamics of the vegetation was also a source of much interest, especially in respect of the role of biotic factors as agents of change.

However, deeper understanding of the processes at work demanded a more reductionist and experimental approach, including separation of the various ecosystem components and environmental factors for purposes of detailed research. For example, thorough autecological studies of key species such as heather (*Calluna vulgaris*), bracken (*Pteridium aquilinum*) and the moorland grasses (*Molinia caerulea* and *Nardus stricta*) on the one hand, and hill sheep, cattle, grouse and deer on the other, were essential and have continued to occupy many ecologists over the past 50 years. Work on the life history of heather, demonstrating the characteristics of the growth phases through which it passes during a life span of around 30 years in favourable habitats (pioneer, building, mature and degenerate), proved fundamental in understanding the interactions between heather as primary producer and the herbivores which to a greater or lesser degree depend on it. A knowledge of the life history of heather was also vital for understanding its response to traditional management practices, including cutting, grazing and burning. The ecological consequences of the use of fire, at first on an occasional basis, probably ever since the original forest clearance, and then more regularly for at least the past 200 years, urgently required investigation. This demanded, first, measurement of fire temperatures and intensity and their effects on subsequent regeneration, and then studies of the redistribution of nutrients in the ecosystem, in order to answer questions about the possibility of gradual depletion of the fund of certain nutrients. Foreseeing a more synthetic approach, attempts were made to draw up nutrient budgets, incorporating effects of management alongside estimates of inputs from rainfall, atmospheric pollution and soil processes such as leaching, nitrification and nitrogen fixation. Recent studies in the Netherlands and East Anglia of rising inputs of nitrogen derived from agricultural or industrial sources have clearly demonstrated damaging effects on heathland vegetation. To elucidate the impacts of the different herbivores – sheep, cattle, grouse, deer and invertebrates – fundamental research on their feeding behaviour was required. Little was previously known about the food webs in heathland – indeed, not much at all about the invertebrate fauna. Longer-term changes in community composition, soil properties and overall biodiversity had to be quantified. In addition to the role of fire, it was necessary, as far as possible, to disentangle the effects of other practices such as harvesting heather for a variety of uses, turf stripping, and above all grazing at very varying intensities by several different domestic and game animals, alone or in various combinations.

This was the phase of the analytical, reductionist approach to heath and moorland ecology, which has yielded a vast amount of data over the past half century. What has been achieved as far as the rural economy is concerned?

First, in respect of the main land uses, it is now possible to distinguish much more precisely between ‘good’ and ‘bad’ practice, where by ‘bad’ we mean practices which lead to habitat deterioration. A number of publications have set out guidelines for good management, and advice on how to avoid the bad.

Second, we can now reach an informed view on the sustainability of these systems of management, and the extent to which they are compatible with the maintenance of biodiversity in the countryside. To select one example, research has drawn attention to an interesting dilemma. Generally speaking, the main purpose of heath and moorland management in the recent past has been to provide food for herbivores – chiefly sheep, grouse or deer – and the best way to do this is to maintain heather as the dominant plant over a large proportion of the total area, and to keep it in the building phase when it is most productive. But in this phase it is at its most competitive and exclusive, limiting the variety of associated species. Thus, good management for sheep or grouse may not be good for maximizing biodiversity. In practice, however, it is seldom possible to keep up intensive management over a whole hill or moor because of difficulties of terrain or weather, so normally there are places left for a greater variety of plants and animals. Nevertheless, if conservation objectives are to be integrated with other land uses, management will need to find ways of promoting diversity and creating more of a mosaic in the vegetation.

Third, taking the results of all these lines of work together, it becomes apparent that whether the present problems are seen from an ecological or a socio-economic viewpoint, the tendency to concentrate on one or a few types of land use across wide areas of countryside has not been beneficial to the rural economy.

Fourth, one other important way in which this work on heath and moorland ecology has contributed to the rural economy is by providing reliable data which can form the basis for models of these ecosystems, incorporating their environmental and biological characteristics and exploring the consequences of various options for change, for example in deer numbers, sheep or cattle grazing, or burning frequency. Such models, prepared by the Macaulay Land Use Research Institute, are already up and running as guides for better land management. Thus we are now moving back into a synthetic, holistic way of thinking on this issue.

A RURAL RENAISSANCE

Turning, lastly, to the wider question of the need for a rural renaissance, what lessons can be learnt?

The first thing to do is to find out exactly what is going wrong. This is a very big task, but as in the heathland example, a start has to be made by separating out the many interacting causes, for detailed research. On the ecological front, at least in the uplands, there has undoubtedly been a decline in habitat potential, probably ever since the original large-scale forest clearance. In very recent times, well-documented reductions in biodiversity, losses of semi-natural habitats, declines in the populations of certain game species such as grouse and salmon, and changes in the landscape and vegetation, all serve as indicators. On the social and economic front, the movement of people away from the countryside, and the financial problems of farmers and landowners all need thorough analysis. Among the causes of the present malaise must be changes over the years in grazing patterns, systems of land use, husbandry, gamekeeping and many others, all driven by economic forces and local, national and European government policies.

All these need, and receive, study; but at the very centre is the fact that, across the countryside as a whole, land uses have moved from mixed, relatively small-scale agricultural enterprises, to single uses often extending over large areas with accompanying

intensification of management, whether it be for agriculture, forestry or sporting activities. Even if each of these can be made 'sustainable' when considered in isolation, the present-day imbalance of rural land uses is not compatible with overall sustainability. Concentration of effort into any one system of management over wide tracts of country is inimical to biodiversity and, often, also to the rural economy. So an ecological assessment of what is going wrong *on a large scale*, involving the economic and social aspects as well as the environmental, is a priority.

Much of this is already quite well established, but – to follow again the example of the heath and moorland work – if we are to reach towards a rural renaissance we do need to move comprehensively into large scale ecology, adopting a holistic outlook. This is now quite fashionable, and research projects on large scale processes in ecology and hydrology are increasingly receiving funding. However, many of these at present are focused on how the spatial distribution of species and populations are determined and how the dynamics of change in these are related to landscape patterns, which is not quite what I have in mind in the present context. As I see it, what we need now is the imagination and, of course, funding to set up experimental management in a number of quite large regions, much larger than the individual estate or farm, each having a degree of geographical coherence, where interdisciplinary research could lead to far-reaching revisions of land use patterns. Beginning with collation of existing data on the nature of the resource (soil, vegetation, etc.) and impacts of current practices on the local environment, wild life and economy, models would be constructed to evaluate options for change. Using these, a blueprint for the future management of the region would be drawn up and progressively implemented. All aspects of the project would be carefully monitored over quite a long time-scale. In such an enterprise, applied ecologists would co-operate not only with specialists in particular land uses but also with landowners, estate and farm managers, others of the rural communities, nature conservationists, those with recreational and tourist interests, economists and sociologists. The aim would be to create greater diversity in landscape, in management objectives and in employment, in which the co-existence of local communities with a more varied environment and wild life would be seen as an opportunity, not a threat. Most, if not all, current uses and activities in the countryside would find a place, and some indeed would still need quite extensive areas, which are also necessary for certain species at the top of the food chains. But these would be set in the context of a more richly patterned countryside, in which a proportion of the total area could be devoted to regaining lost habitats and re-creating a mosaic of different types.

Lest you should think that the idea of projects like this is too fanciful, I would draw your attention to a programme of research with precisely these objectives, in three selected large upland areas in Sweden, entitled 'Towards Harmony Between Man and Nature in the Mountain Region'. This programme embraces environmental, economic and social aspects, and aims "to achieve a scientifically based strategy for a sustainable and beneficial use and management of the natural resources". Research covers such uses as reindeer husbandry, forestry, hunting, fishing, recreation, tourism and nature conservation, between some of which at present there is quite serious conflict.

My suggestion is that while ecology and ecologists already contribute significantly to the rural economy in work ranging from surveys, through impact assessments to rehabilitation and recovery programmes and in many other ways, it will be in projects such as those I have outlined that a really significant thrust could be made towards a rural renaissance. This may still be quite a long way off

and it will require funding and co-operation from many sources, but I am convinced it is a way forward. It will also demand a huge educational effort, to convince developers and land managers of the vital importance of biodiversity to the health not only of the countryside but also in the long run to the future of humanity. We have to show that incorporating the needs of wild life as one of the goals of development can be made to lead to new jobs, and that more money can be made by conserving nature than destroying it (Holdgate 1997). All relevant disciplines have to get together to plan the integrated management of the environment as a foundation for the future. Ecologists, and the IEEM, must have a vital role in this.

So my message rests on my belief that ecology, and especially applied ecology, must at the start be soundly based on a holistic, descriptive foundation, and then has to proceed through a rigorous analytical and experimental phase, moving ultimately to a synthetic, and again holistic outlook, when its insights can effectively foster a new rural renaissance.

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Environment • Countryside Planning And Management

In the Journals

Compiled by Pat Rae, Peter Shepherd and Jim Thompson



British Ecological Society

The papers reviewed bring the Journals of Ecology and Applied Ecology up to date, and continue with the Journal of Animal Ecology. This is something of an achievement. There does seem to be something of a trend in that the Journal of Ecology has had some editions where practically every article is worthy of review but articles of relevance to IEEM members have been somewhat sparse in the Journal of Ecology

K. Boudjemadi, J. Lecomte and J. Clobert

Influence of connectivity on demography and dispersal in two contrasting habitats: and experimental approach.

Journal of Animal Ecology, 1999, 68: 1207-1224

This experimental study examined how habitat connectivity affected the common lizard (*Lacerta vivipara*). The authors expected that the loss of connection between habitats would modify juvenile dispersal patterns, have a different effect on dispersing and philopatric (tendency of animals to remain in their home area) individuals, and negatively affect survival rates and fecundity. The study was based on an experimental design of eight two-patch units, four of which were connected by dispersal. The treatment was applied to grassland and a woodland clearance, which the authors define as a rich resource availability habitat and a poor resource availability habitat respectively. This was based on characteristics such as availability of insect food, hours of sunshine and soil moisture.

Adult and subadult males and adult females with their own litter of juveniles and subadult females were transplanted into the experimental plots from local natural populations. Recapture was undertaken using both pitfall trapping and less frequently hand capture to monitor movements within the habitat patches.

The experiment identified differences in dispersal patterns and demography between connected and unconnected habitat patches. Juvenile dispersal rates were higher in the poor habitat than in the rich. In connected patches only one dispersal event occurred, whereas in unconnected patches two dispersal events took place. The authors suggest that the second dispersal event was in response to the lack of connection which caused the late dispersal of individuals that would have remained philopatric in a connected environment. Those individuals that dispersed in the second event also appeared to have lower winter survival rates than philopatric individuals. The authors suggest that this would be expected if these individuals were 'forced' to disperse.

The experiment also recorded differences between connected and unconnected habitat patches in winter, juvenile survival rate and female reproduction, depending on whether in resource rich or resource poor habitats. The highest winter juvenile survival rates

were recorded from connected resource-rich habitats. In contrast connection in resource-poor habitats decreased winter survival rates. Female reproduction was also different between connected and unconnected patches. Higher reproductive success was recorded from connected units and a loss of connectivity reduced reproductive rates regardless of the habitat type.

The authors discuss the implications of the findings for conservation management in relation to addressing habitat fragmentation and conclude that management should take into account habitat characteristics and behavioural features of target species.

Anssi Laurila and Jutta Kujasalo

Habitat duration, predation risk and phenotypic plasticity in common frog (*Rana temporaria*)

Journal of Animal Ecology, 1999, 68: 1123-1132

This paper examines how common frog tadpoles respond to changing environmental factors, in particular the drying out of a pond and related to this the increased risk of predation from dragonfly larvae. The laboratory based experiment compared the rate of metamorphosis in tadpoles in pools where water was gradually removed compared to pools where the water level was kept constant. The effect of increased water temperature with decreasing water volume was removed during the experiment.

Tadpoles responded to the decreasing water volume by metamorphosing earlier and at a smaller size. In addition a greater proportion of tadpoles metamorphosed in the decreasing water volume treatment.

In the decreasing water volume experiments tadpoles were less active and the researchers found significant positive correlation between activity late in the experiment and metamorphic size. The authors conclude that this suggests that the metamorphic response to habitat drying is behaviourally mediated.

Early in the experiment the tadpoles developed slower in the presence of dragonfly larvae which are strong predators of tadpoles. In the constant volume treatments the larval period was longer in the presence of the dragonfly larvae.

The authors conclude that the common frog is able to respond to drying out of breeding ponds adaptively by speeding up their development. They also concluded that increased temperature associated with lower volumes of water is not required to induce this response to shrinking water volumes. In addition the drying out of the water body is more important in determining development rate than the presence of predatory dragonfly larvae.

D.P. Ostaff and D. T. Quiring

Role of the host plant in the decline of populations of a specialist herbivore, the spruce bud moth.

Journal of Animal Ecology, 2000, 69:263-273.

This study investigated the reasons why the spruce bud moth (*Zeiraphera canadensis*) populations decline at crown closure in white spruce (*Picea glauca*) forests in New Brunswick, Canada. The authors investigated 3 potential explanations for the decline including (i) increased first instar mortality as a result of asynchrony between egg hatch and budburst, (ii) increased larval mortality and decreased female fecundity due to reduced nutritional quality of foliage and (iii) decreased egg density due to lower egg laying by females in closed stands.

The authors conducted field studies in five managed and one unmanaged old field stand of white spruce forest. The managed stands contained trees that had been planted as 2 year old seedlings of 6-15 years of age. The youngest stand included trees approximately 1 metre in height with feeding noticeable on more than 5% of the trees. The unmanaged stand contained trees between 6 and 22 years old ranging in height from 4 to 6 metres. The branches from neighbouring trees are over lapping and heavily defoliated, but bud moth densities were recorded at very low levels.

The authors recorded dates of budburst, egg hatching, larval survival, sex ratio, wing length of female moths, phenological development of buds and soil temperatures in open and closed forest stands between 1990 and 1992.

The authors conclude that the decline in population of the spruce bud moth is due to changes arising from the closure of the crown of the forest, which reduces the survival of larval stages and also the rate of oviposition. It is suggested that this is due to increased asynchrony between the time of budburst and the time of egg hatch with increasing shading of tree crowns. This resulted in high mortality of first instar larval stages in closed crown forests. The asynchrony between budburst and egg hatch arises as a result of the delay in budburst in closed crown stands where snow cover reduces soil and root temperatures when air temperatures are above the minimum threshold for egg development.

The study also indicates that female bud moths have a preference for open-grown trees for oviposition. The authors suggest that this is not surprising for a species where the success of instar survival is closely related the phenology of the host plant as selection would favour females laying fewer eggs in closed crown forests where offspring survival is reduced.

S.D Albon, T. N. Coulson, D. Brown, F.E. Guiness, J.M. Pemberton and T.H. Clutton-Brock

Temporal changes in key factors and key age groups influencing the population dynamics of female red deer

Journal of Animal Ecology, 2000, 69: 1099-1110.

This paper reports the findings of a study of female red deer on Rum in Scotland over the period between 1971 and 1997. This is one of the longest running studies of a large herbivore population. The results are reported over three phases 1971 and 1980, 1981 and 1989 and 1990 to 1997. During the first 10 years there was sustained population growth, whereas in the following 17 years the numbers of female deer fluctuated close to the habitat carrying capacity. The study of the factors that contribute to the variance in population growth is based on the structured demographic accounting approach, which takes into account the age structure and also examines the variance in relative growth rather than log population size. In the first phase of population growth from 58 to 148 animals the variance in population growth was small. During this period changes in birth rate made the largest contribution to variance in population growth (30%) followed by adult winter survival (23%). Calf summer and calf winter survival contributed less than 10%. Consequently during this period of growth female birth rate is regarded as the key factor contributing to the variance in relative growth rates.

During the following 17 years in both periods from 1981-89 and 1990 to 1997 the contribution of birth rate to the variance in population growth fell to less than 5%, but adult winter survival increased to 36% through the 1980s and up to 40% in the 1990s. Consequently, in contrast to the first period when the population size was increasing, in the later periods female recruitment became less important and female survival became increasingly important with adult female winter survival being the key factor contributing

most to the variance in population growth. The study also found that this was reinforced by co-variation with female calf winter survival. The authors report that much of the earlier investigations into population dynamics of red deer on Rum have concentrated on processes influencing birth rate and winter calf survival. This study would indicate, however, that adult winter survival is the key factor contributing to variance in relative population. The authors argue that more emphasis should be placed on processes influencing winter survival and adult life span in female red deer.

I.Chuine, J.Belmonte and A. Mignot. **A modelling analysis of the genetic variation of phenology between tree populations .**

Journal of Ecology, 2000, 88: 561-570.

This paper is of interest in the context of the growing tendency for plant suppliers to emphasise the local genetic character of species used in landscaping or habitat restoration or creation schemes. It is well known that stocks of various tree species regularly used in the UK may come from considerable distances. It also has significance for the likely survival of plantings in the context of global warming. In this context many studies have attempted to predict the consequences of increasing temperatures on the phenology of temperate zone trees to determine whether species would break bud or flower earlier or later and thus experience increased or decreased risks of frost damage.

The paper picks up the point that the phenology of temperate woody plants is commonly assumed to be adapted to the local climate. The paper tested the hypothesis that because of the high gene flow expected between Forest species, the high between year variance of thermal conditions at a given place and the high plasticity of phenology regarding temperature, the genetic variation of phenology between populations is likely to be *insignificant* for many lowland tree species. The test was carried using the international phenological garden which consists of a number of recording stations throughout Europe where various clonal tree species are grown. All individuals of a particular species at all sites belong to the same clone. Phenological data for these trees have been published in *Arborea Phaenologica* since 1958. Only *Corylus avellana* showed significantly different responses between populations. In theory the differences observed between populations depend on the thermal conditions at the location of transfer and that these differences are less marked in warmer conditions. The results indicate that local adaptations will not be a serious constraint in predicting the phenological responses of temperate lowland tree species to global warming.

R.M. Bekker, G.L. Verweijl, J.P. Bakker & L.F. M. Fresco. **Soil seed bank dynamics in hayfield succession.**

Journal of Ecology, 2000, 88: 594-607.

This paper reports on work at the Drentse A Nature Reserve in the Netherlands, where the vegetation has been studied since 1972. The study areas consisted of a dry series of sites and a wet, more species rich series of sites where management by hay cutting had been resumed for different periods.

The number of seeds of many late successional species showed a significant increase duration the succession with only two characteristic late species present in the seed bank of the early stage of each series. Comparison with data for an ancient undisturbed wet hay meadow in England suggests that seed longevity of hayfield species is generally low. Similarity between the seed bank and established vegetation was generally low in the English and Dutch examples. The paper concludes that the soil seed bank is unlikely to determine hayfield succession in the Drentse A Nature Reserve since the composition of the seed bank tended to follow that of the above ground vegetation. Increases in plant species richness following the cessation of fertilizer application, the main goal of restoration management , therefore depend to a large extent on an influx of seeds of most species from outside the site.

C.J. Ellis and J.H. Tallis. **Climatic control of blanket mire**

development at Krenta Moss, north-west Scotland.

Journal of Ecology, 2000, **88**: 869-889.

Four Peat cores were collected from Krenta Moss, north-west Scotland and analysed for botanical macrofossils and peat humidification. The remains of *Racomitrium lanuginosum* and *Sphagnum papillosum*, in conjunction with changes in peat humidification provided the clearest indication of past increases in climatic wetness to impact on upon mire hydrology and ecology. Eight wetshifts were identified beginning at c. 3250, 2250, 2150, 1400, 1150, 875, 6000 and 325 calibrated years BP. There was evidence that the extinction of *Sphagnum imbricatum* at Krenta Moss was caused by an increase in climatic and mire surface wetness when it was replaced first by *Racomitrium lanuginosum* and then by *Sphagnum papillosum* and that increased climatic wetness and human land use were responsible for the shift from an early minerotrophic peatland to ombrotrophic blanket mire at c. 4070cal.BP. The paper concludes that the effect of human induced global warming on Britain's blanket mire resource will probably be significant, bearing in mind that British blanket mires have international conservation status.



Blanket bog and peat cutting in the Northwest of Scotland

A.S. Marsh, J.A. Arnone III, B.T. Bormann and J.C. Gordon. **The role of *Equisetum* in nutrient cycling in an Alaskan shrub wetland.**

Journal of Ecology, 2000, **88**: 999-1011.

Plants of *Equisetum* are generally thought to be of little value in ecosystems and something of a nuisance in habitat creation schemes. The study showed however that *Equisetum* acquires and cycles phosphorus and other nutrients more efficiently than other community members. While *Equisetum* plants represented only 5% of the above and below ground biomass in the community, they contained 15% of the P and 24% of the K. *Equisetum* plants accounted for 29% of the P and 39% of the K in annual community foliage litter fall. The key to this lies in the deep rooting habit of *Equisetum*. While the majority of their roots were located in the C horizon, the majority of roots and rhizomes of other species were located in the overlying O horizon. The absorption of nutrients from the C horizon by *Equisetum* helped bring P and other minerals to the soil surface, increasing the amount of minerals in the O horizon and thus making them

potentially available to other species.

K Sand-Jensen, T Riis, O. Vestergaard and S.E.Larsen.

Macrophyte decline in Danish Lakes and streams over the past 100 years.

Journal of Ecology, 2000, **88**: 1030-1040.

This paper examines changes in freshwater habitat by comparing the submerged flora in lakes and streams in 1896 and 1996. Most of the lakes which contained a diverse submerged vegetation 100 years ago now have the high phytoplankton biomasses and summer transparencies characteristic of eutrophication. The majority of lakes included in both old and recent studies have lost all or most of their submerged species. Species richness declined markedly in the 13 streams included in both studies. The paper points out that the freshwater macrophyte flora in north-west Europe presently includes a high proportion of rare species which are threatened by extinction and that the presence of many species that barely survive in small and distant populations will make the re-assembley of submerged aquatic communities difficult.

I.T. Handa and R.L Jefferies. **Assisted revegetation trials in degraded salt marshes.**

Journal of Applied Ecology, 2000, **37**: 944-958.

Land degradation has occurred in coastal marshes of the Hudson Bay lowlands, where foraging activities of staging and breeding lesser snow geese (*Anser caerulescens caerulescens* L.) have damaged vegetation and soil. The mid continent population of snow geese has increased exponentially at about 7% per annum in recent decades, probably as a result of the high quality agricultural food subsidy that is available to the birds during winter and along migration routes. Grubbing by adults in early Spring and intense family grazing by family groups in summer has led to a loss of salt marsh vegetation via a positive feedback mechanism that results in hypersaline soil. Former *Puccinellia phryganoides* – *Carex subspathacea* swards have been replaced by mudflats often devoid of vegetation.

The objective of this two year study was to see if, in the absence of goose foraging, *Puccinellia* and *Carex* could re-establish. In particular, the authors assessed the potential for recolonization when assisted by a) importing plugs of intact vegetation and b) amelioration of the surface with peat mulch and/or fertiliser.

Transplants of *Puccinellia* established in degraded sediments, but those treated with fertiliser and peat showed significantly higher growth than those in bare soil after two growing seasons. *Carex* transplants did not establish readily in degraded sediments, and the peat/fertiliser treatments resulted in no growth enhancements.

Growth rate and mortality of plants both varied between sites and years, reflecting variation in the frequency of hot dry weather from late June to early August of each year, and the salinity and water content of soils during that period. The authors go on to discuss the potential for revegetation of mudflats in the context of soil degradation processes. Fine-grain variation in soil conditions presents a major challenge for the restoration of plant assemblages in these coastal marshes.

The authors conclude that the extent of soil degradation and vegetation loss makes it unlikely that unassisted revegetation will occur at some sites, even in the absence of goose foraging, without erosion of consolidated sediments and the establishment of plant assemblages in fresh unconsolidated sediments.



Herdwick sheep grazing in the Lake District

J.W.Humphrey and G.S. Patterson. **Effects of late summer cattle grazing on the diversity of riparian pasture vegetation in an upland conifer forest**
Journal of Applied Ecology, 2000, **37**: 986 - 996.

This is an interesting medium term study relating to biodiversity in upland forests. Many of the upland forests were formerly grassland grazed by domestic stock but with afforestation grazing often ceases and biodiversity is lost. This is accompanied by reversion to coarse species-poor grassland and eventually to scrub. The paper reports on the introduction of controlled cattle grazing on pasture areas within the forest.

There were two treatments: late summer grazing and ungrazed. Assessments of plant species were made prior to the commencement of grazing and then in 1988, 1991 and 1997. There were three main vegetation types - Flush vegetation associated with calcareous springs, acid *Agrostis capillaris* - *Festuca ovina* grassland and *Juncus effusus* rush pasture.

Grazing had a significant effect on plant species richness which declined in ungrazed plots and remained static in grazed plots over the 1988 - 1997 period. There were no recorded effects of grazing on species abundance, nor on the frequency of rare sedges and herbs of particular conservation importance. From the viewpoint of halting the decline in diversity the management was successful and the paper discusses the possible significance of different approaches to stocking density and the possible use of sheep rather than cattle. Cattle appear to be favoured because of being more effective in reducing the bulk of coarse grasses. The paper also discusses approaches where the objective of grazing might be to increase the diversity of other groups such as insects or birds rather than plants. Overall the paper concludes that cattle could be employed as a management tool for species-rich grasslands in upland forests.



Highland Cattle grazing in the uplands in Scotland

M. Anciaes and M.A. Marini. **The effects of fragmentation on fluctuating asymmetry in passerine birds of Brazilian tropical forests.**
Journal of Applied Ecology, 2000, **37**: 1013 – 1028.

This study supported the theory that habitat fragmentation is a major cause of population extinctions. Fluctuating Asymmetry (FA) is a means of measuring morphological changes in the individuals of populations. FA refers to the difference between the right and left sides in characters that should otherwise be symmetrical. There have been studies with other groups of species that demonstrate the principle e.g. lizards from small habitat patches represent higher levels of FA than from large ones. Because genetic and environmental stress have cumulative effects, FA may represent a sensitive biological indicator of environmental stress in populations under genetic stress.

The current study compared FA in the wing and tarsus of passersines from seven forest fragments and from seven control large tracts of continuous Brazilian Atlantic Forest. The bird species in the communities were analysed, and species classified according to their degree of dependence on the forest for breeding, main foraging habit, and diet. The wing and tarsus FA were significantly greater in fragments of forest than in continuous areas, and both were negatively correlated with forest fragment size. Differences in FA varied among foraging guilds, being more evident for insectivorous species, especially those feeding in or near the understorey. The study did not evaluate the genetic variability of the populations so it was not possible to determine whether it was environmental stress (e.g. parasitism, pollution, low food) or genetic stress (e.g. high inbreeding, hybridisation) that most influenced the FA levels in the forest fragments.

In overview, the authors conclude that FA is a useful tool to assess the effects of fragmentation on forest birds, and may be applied in monitoring neotropical birds. FA indices might be profitably developed, particularly in species most threatened by fragmentation effects and when investigated in different morphological characters.

R.S. Smith, R.S. Shiel, D. Millward and P. Corkhill. **The interactive effects of management on the productivity and plant community structure of an upland meadow: an 8-year field trial**
Journal of Applied Ecology, 2000, **37**: 1029 – 1043.

This is a useful paper on the management of an Environmentally Sensitive Area (ESA). The policy in the Pennine Dales ESA aims to enhance plant species diversity in agriculturally improved meadows and return them to a 'traditional' species composition. The approach involved three grazing treatments, two fertilizer treatments, three hay cut treatments and two seed addition treatments:

grazing: autumn grazing with cattle and sheep; spring grazing with sheep; both regimes

Fertilizer: 25kg per ha N plus 12.5kg per ha P2O5 and K2O or None

Hay cuts: 3 dates

Seed addition treatments: No seed, seed of many species

By 1998, all the main treatments had produced small but significant increases to plant species diversity. A particularly large increase in diversity occurred with the combination of autumn and spring grazing, 21 July hay cut date and seed addition treatments.

Rhinanthus minor spread to most plots after its introduction as a constituent seed treatment. By 1996 it was particularly abundant in all treatment combinations that included autumn grazing, no mineral fertilizer and a July hay cut.

The paper concludes that management to increase the number of plant species in agriculturally improved mesotrophic grassland requires the joint implementation of appropriate cut date and grazing regimes, to provide regeneration niches, and the application of seed to provide species to fill these niches. The small amount of mineral fertilizer used in this experiment had a measurable effect but was of lesser importance. This ties in with the paper also reviewed in this edition on the degradation of the seed bank in the Drentse A Nature Reserve in the Netherlands and the need to enhance this artificially.

Recent Publications

Hampshire's Countryside Service ISBN 1 85975 435 x

At the outset I must declare that I find it somewhat difficult to be totally objective about a publication from a Service for which I have worked for the last fourteen years. "Hampshire's Countryside Service" was launched in the auspicious setting of the Great Hall in Winchester on 1 February.

The publication aims to provide both residents and visitors to the County with more information about the Service. It is a contribution to the Best Value process, which has highlighted such a need, and demonstrates the way in which the Countryside Service has a vital role to play in supporting the corporate strategy of the County Council.

Set against a backdrop of striking images, and a foreword by Sir David Attenborough, the fifty-two-page document illustrates both policy and practice.

The richness and diversity of Hampshire's countryside is stressed (on numerous occasions) and Hampshire County Council's response to conserving this heritage, and making it available to people, is demonstrated. The Countryside Service is responsible for the management of more than eighty countryside sites covering in excess of 4400 hectares. These include seven major country parks, and more than twenty nature reserves, five of which are National Nature Reserves. The Service also has a statutory responsibility for the recording, protection and maintenance of over 7000 public rights of way, which provide more than 4585 km of ready access to Hampshire's countryside.

A gazetteer of countryside sites provides brief details of location and features of interest, together with a contact telephone number for the site management team. A further section links to the Biodiversity Action Plan for Hampshire, and gives limited information on "key habitats" and "priority species" found on certain sites.

This well presented publication provides an interesting overview of the Countryside Service, and is a good basis from which to discover more of what Hampshire's countryside has to offer. But as I said at the beginning, I am biased.

To order (£3.00) contact 0800 028 0888 (credit card facility available)

Andy Parfitt, MIEEM is Sites Manager, Hampshire County Council Countryside Service

Biodiversity and Ecological Economics - Participation, Values and Resource Management Earthscan Publications Ltd, London ISBN 1-85383-676-1 (pbk)

Edited by Luca Tacconi, this book is another in a series of publications by Earthscan which probes thought by the use of a series of case studies linked to a central theme. The case studies range far and wide and occupy 120 pages. The initial 5 chapters comprise: Introduction and background, Scientific methodology, Paradigms and Environmental Decision-making, Economics, Intergenerational Equity and Biodiversity Conservation, Economics, Land Use Planning and Participation - quite a menu. With phrases like 'ecological economics' is relatively new and its paradigmatic position is still evolving' - the book is not a light read and is not helped by the

frequent use of abbreviations for a number of complex issues e.g. NPVMOD - NPVCOP, CBA although these are clearly defined. All the same I would quite like to stand back from the daily routine and think about some of these wider issues - this would be a good place to begin.

Applied Ethnobotany People, Wild Plant Use and Conservation

Anthony B Cunningham

Earthscan Publications Ltd, London ISBN:1 85383 697 4

Again published by Earthscan, this book is part of a series of people and plants conservation manuals and is a joint initiative of WWF, UNESCO and Royal Botanic Gardens at Kew. The theme is that wild or non cultivated plants are crucial to the lives of a large proportion of the world's population providing low cost building materials, fuel, food supplements, medicines, tools and sources of income. The book is the first practical guide to be published on how to manage wild plants sustainably. It sets out the approaches and field methods involved in participatory work between conservationists, researchers and primary resources users. It explains how local people can learn to assess the pressures on plant resources and what steps to take to ensure their continued availability. There are eight substantial chapters - Conservation and context - different times, different views; Local inventories, values, and quantities of harvested resources; Settlement, commercialization and change; Measuring individual plants and assessing harvesting impacts; Opportunities and constraints on sustainably harvest : plant populations; Landscapes and ecosystems: patterns, processes and plant use; Conservation behaviour, boundaries and beliefs and Striving for balance: looking outward and inward.

The Millennium Atlas of Butterflies in Britain and Ireland by Jim Asher, Martin Warren, Richard Fox, Paul Harding, Gail Jeffcoate, Stephen Jeffcoate

Oxford University Press ISBN 0 19 850565 5

This is a truly superb publication by Butterfly Conservation, The Dublin Naturalists Field Club and the Centre for Ecology and Hydrology - a must for everyone with an interest in Butterflies and, from the viewpoint of interest for IEEM members, features the ecology of each of the species in some detail. It presents the findings of the most comprehensive survey of butterflies ever undertaken in Britain and Ireland, charting their varying fortunes following widespread loss of habitat and climate change. It provides an up-to-date assessment of our butterflies, the habitats they live in, the threats they face, and the major changes that have occurred since publication of the previous such atlas in 1984. But the book is more than an atlas and goes well beyond a 'naturalists guide'. The chapters start with a background and then consider butterfly habitats. There are then two chapters on recording and data collection and interpreting the data. The main part of the book - 273 pages - is devoted to accounts of each and every species. There is an excellent and often very beautiful illustration of each adult and usually the larvae or eggs. Each is reported with its conservation status and the European / world range and accompanied by a distribution map showing sightings for the period 1995-99, 1970-1982 and pre 1970.

Further chapters consider the pattern and cause of change and finally a thought provoking chapter on conserving butterflies in the new millennium dealing with many of the significant ecological issues - loss of habitat, climate change habitat fragmentation and isolation, agricultural intensification and chemical pollution, the UK Biodiversity Action Plan and the Republic of Ireland Biodiversity Plan. There are 9 appendices, no. 8 showing a fascinating series of butterfly phenograms. Finally there is a list of over 450 references. At £30.00 this book is indeed value for money.

Habitat Monitoring for Conservation Management and reporting
This is a series of three publications produced by the Countryside Council for Wales reporting on the EC LIFE Co-funded project on Integrating monitoring with management planning: A demonstration of good practice on Natura 2000 sites in Wales. This is a substantial study in three volumes : 1: Case Studies, 2: Field Methods, 3: Technical Guide. There are actually 20 case studies, covering Sand Dunes, Grasslands and Heaths, Fens and Mires, Montane and Alpine habitats and Woodlands but with differing aspects of each habitat covered. The study is certainly rigorous and represents a considerable investment of time and effort and the sections on Field Methods and the Technical guide demand very careful reading. In the preface the conservation objective is identified as being pivotal and is the key link between management planning and monitoring and from which much else follows. From the practical viewpoint it seems that a proportion of the habitats examined did not meet their objectives and they were identified as being in need of urgent management attention to ensure recovery. In some cases this is now underway . Requests for copies should be sent to Karen Parry, Headquarters, Countryside Council for Wales, Plas Penrhos, Ffordd Penrhos, Bangor, Gwynedd LL57 2LQ - k.parry@ccw.gov.uk.

Countryside Recreation 9 (1) Spring 2001

This is the regular publication of the Countryside Recreation Network, the purpose of which is 'Exchanging and Spreading Information to develop best Policy and Practice in Countryside Recreation'. This edition features the CROW Act with separate articles on Parts 1,2 & 3. This is useful reading for those interested in the new Legislation but unable to attend the Conference in Birmingham. There is also an article on National Parks for Scotland - a step closer - a timely

introduction for the next Scottish Section Meeting. Finally there is an interesting article on examining the issues behind reducing the exclusion of people with disabilities and older people from the Countryside. The CRN also lists Countryside Recreation and Training Events and has a series of modestly priced publications.
Contact: Emma Barratt, Network Manager, Department of City and Regional Planning, Cardiff University, Glamorgan Building, King Edward VII Avenue, Cardiff, CF10 3WA. Tel: 029 2087 4970, Fax: 029 2087 4728, Email: crn@cf.ac.uk

Biodiversity News Issue 14 - January 2001 - The Newsletter for Biodiversity Action planners

There is a wealth of information mostly in the form of short articles in a newsletter format.

Available from: Biodiversity Secretariat, Room 902D, Tollgate House, Houton Street, Bristol BS2 9DJ. Tel: 0117 987 6276 Fax: 0117 987 8182 Email Matthew_medlock@detr.gsi.gov.uk.

Wild London - The Wildlife Trusts, Winter /Spring, 2001

This is the newsletter for members of the London Wildlife Trust. It is a useful publication for everyone with an interest in urban ecology for there is much in London which applies to other large cities. The two major articles are: Where have all the sparrows gone? and London's amphibians and reptiles: fact or fiction. The London Wildlife Trust can be contacted at Harling House, 47 - 51 Great Suffolk Street, London SE1 0BS Tel: 0207261 0447, Fax: 020 7261 0538, E-mail: londonwt@cix.co.uk

DEVELOPING NATURALLY

A Handbook for Incorporating the Natural Environment into Planning and Development



ASSOCIATION OF
Local Government Ecologists

Developing Naturally is a 200 page tool kit packed full of practical help and guidance.

The handbook contains policy advice, model planning conditions, key references, and identifies relevant codes of practice and British Standards. Also, a wide range of check lists prompt users towards sustainable solutions for nearly every situation to be encountered within the development process. Developing Naturally will help you to:

- Improve standards for nature conservation in new development;
- Achieve consistency with Government planning policy guidance for the natural environment;
- Achieve development that makes a very positive contribution to BAP habitat and species targets in the UK;
- Prepare planning conditions and planning agreements that secure really effective action for nature conservation.

The approach promoted by Developing Naturally can be applied to all forms of development including residential and industrial development, mineral and waste proposals, and applications subject to statutory or voluntary environmental assessment.

ALGE has already bought a copy for all of its members in the UK, and English Nature and CCW have also bought copies for each of their teams in England and Wales.

Copies of Developing Naturally are available from:

Mike Oxford, ALGE, PO Box 1164, Pensford, Bristol, BS29
(Please make cheques payable to M. J. Oxford)

Price £29.50 plus £2.50 p&p

NEWS IN BRIEF

The Transatlantic Countryside Exchange: a Unique Professional Development Opportunity.

The North America/UK Countryside Exchange is recruiting team members for its 2001 series of case studies. Successful applicants will spend up to ten days in the UK, the USA or Canada working with and learning from fellow specialists as they grapple with real issues faced by rural and urban fringe communities. Since 1989 more than 300 British Countryside professionals and volunteers have joined equal numbers of colleagues from across the Atlantic in teams of 8 to work at carefully chosen case study sites. The Key theme is **Managing Change in the Countryside**. The closing date for the main annual selection is the end of May.

For further details contact CEI Associates Ltd, Progress Centre, Charlton Place, Ardwick Green, Manchester M12 6HS
Tel: 0161 274 3337, Fax: 0161 274 4911, Email cei@cei-associates.org

Planting with Wildlife in Mind - Guidance on the supply and use of native flora for projects in the town or countryside.

The continuing concern over the use of non native stocks for habitat creation and other schemes associated with biodiversity conservation has prompted the publication by Flora Locale of a very useful Code of Practice for collectors, growers and suppliers of native Flora. This is a very concise compendium of definitions and guidance to which traders are invited to sign up. They are then able to display a certificate of compliance. The scheme has the support of Plantlife, the Horticultural Trades Association, English Nature, The World Wide Fund for Nature and others.

Details from **Flora Locale**, 36 Kingfisher Court, Hambridge Road, Newbury, Berkshire RG14 5SJ Tel: 01635 550380, Fax: 01635 550230, E-mail: floralocale@naturebureau.co.uk.

Water Resources for the Future

21st March saw the launch of the Environment Agency's Water Resources Strategy for England and Wales - Sustainable water resources for the Future.

This is a substantial and wide ranging document. It consists of eight chapters - Introduction, Framework and Principles, State of Water Resources, Pressures on Water Resources, Quantifying the pressures on Water Resources, Options and Options appraisal, conclusions and proposals and actions and the way forward. The Full document is 94 pages but there is a useful summary attached which on the last page lists 30 Action Points. One of the more interesting features was the publication of three maps showing current indicative availability of

1. Summer surface Water
2. Winter Surface Water
3. Groundwater

The maps show that in summer, the majority of the country already has no additional water available or is subject to an unsustainable or unacceptable abstraction regime. In winter the overall picture is reversed with most areas having additional water available. There are however some significant areas in the south and east where even in winter, there is an unsustainable or unacceptable abstraction regime. The report tends to focus on how the requirements of industry and Society at large are to be met with most attention being given to issues like leakage and, metering and abstraction. The concern at the launch of a number of the water companies over abstraction

licenses was clearly evident. Wildlife conservation, angling and navigation are dealt with somewhat briefly but there was a clearly reiterated commitment to its duty to promote the conservation and enhancement of the natural beauty and flora of inland and coastal waters and associated land. There was also a clear statement that the agency is a competent authority under the conservation (Natural Habitats etc.) Regulations 1994 which implement the Habitats Directive which is designed to protect sites of international importance to specified flora and fauna. This means that we (The Agency) must ensure that designated sites and associated wildlife are not harmed by current or proposed abstractions. There is also an interesting section on climate change with the suggested significance for southern and midland England of, on average more winter rainfall and less summer rainfall. The evidence is that climate change will increase the year to year variability of rainfall. With droughts and floods it is of course the extreme events which become critical.

Copies of the report are available from:

The Environment Agency Head Office, Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol BS32 4UD.
Tel: 01454 624 400, Fax: 01454 624 409

Annual Report of the Natural History Museum - New Horizons

This report - an impressive document very attractively produced and readable- makes very clear the size and scale of the operations of this museum. Over 5 million people visited the museum or the Zoological museum at Tring and the staff of 800 produce, amongst other things, 420 peer reviewed papers. The development to keep an eye on is going to be the Darwin Centre. This is a brand new building in South Kensington and Phase 1 will house the Zoological collection. Apparently under 1% of the collection is currently accessible to the public and the centre will open up access to around 75%. This is scheduled to open in 2002 so this will definitely be something to watch. Beyond that, Phase Two, on which work has yet to begin, will cover the botanical and entomological collections.

Copies are available from Kirsty Paterson, Public Relations, The Natural History Museum, Cromwell Road, London SW7 5BD
Tel: 020 7942 5024 E-mail: K.Paterson@nhm.ac.uk.

Southampton Oceanography Centre - Annual Report

Although the majority of the interests of IEEM members are land based, there are some who do work in the marine environment. We hope to cover some of these issues at the forthcoming Conference in Torquay in November. The Southampton Oceanography Centre is a joint venture between the University of Southampton and the Natural Environment Research Council. It is one of the largest institutions devoted to research, teaching and technological developments in ocean and earth science. The report itself offers an impressive range of work areas. The centre has eight overlapping research themes and two of particular interest to IEEM: Theme 1 - Large Scale Circulation and the Ocean Interior - the global transport of heat, salt, and other properties is of direct significance to many issues - fisheries, transport, recreation and climate change. Understanding the ocean's role in global warming is crucial to our understanding of climate change. Theme 2 is the upper ocean where the vast majority of oceanic plants and animals are found and where the processes occurring control the entire marine ecosystem.

Available from: The Southampton Oceanography Centre, Waterfront Campus, European Way, Southampton, SO14 3ZH
Tel: 023 8059 6666

Institute News

Membership Directory

The Directory has finally made it to the printers and should be with all members shortly. A number of members did not respond or failed to make their intentions clear despite in some cases various attempts made by the Secretariat to contact so I am afraid there will be some omissions. Council and the Membership Admissions Committee are now considering whether, in future, a Directory should be produced as part of the website with the onus on members to supply up to date information as needed. There are issues associated with the Data Protection Act which will need to be assessed but members reactions will be most welcome.

The 2001 Professional Development Programme

The 2001 Professional Development Programme has proved extremely popular especially the courses on newts and water voles. In each case a reserve slot has also been oversubscribed. The difficulty is that these are now having to be rescheduled because of the Foot and Mouth Disease outbreak. People who have booked on the early newts and water voles courses should have been contacted recently by the Secretariat.

Ayr Symposium

Penny Legg has now completed editing the proceedings of the Ayr Symposium and these will be sent out to all members, probably in May. This will be a very timely publication in view of the current discussion over the rural economy as a whole.

IEEM Member wins MBE

Congratulations to Grant Luscombe, MIEEM on receipt of his MBE in the New Years Honours List for services to Landlife and to the recently opened National Wildflower Centre at Knowsley near Liverpool.

Membership Issues

Applications for membership of the Institute are being received at a healthy rate but there is still enormous scope for many more members. In particular we will want to have passed the 1000 mark for Full members, Fellows and Associates by the September celebration and that goal is just in sight. But we still need the help of everyone to boost the membership and to make absolutely sure that we build a firm base for the future.

One or two members have corresponded recently over the general issue of what the Institute provides and how their expectations are being met. Remember it is your Institute so do please make any suggestions you feel are appropriate. The Committees are currently preparing some questionnaires covering different aspects so I hope as many as possible will complete these when they are sent out - probably with the next *In Practice*. After 10 years it is a very good time to review progress and to identify any new directions that the Institute should be taking.

One area where the Membership Admissions Committee has been making progress is in streamlining the procedures for either joining or upgrading via the portfolio route. This has proved a stumbling block to a number of individuals but several members have now been through this route and a body of 'case law' is being established.

IUCN

IEEM is a member of IUCN and, at its recent meeting, Council nominated David Jamieson, convenor of the Scottish Section to be on the IUCN UK Executive Committee.

IEEM looks eastwards

Through contact with one of our Members, Martin Cahn, who has submitted an article in this edition, we have put together a programme for collaboration in Poland and for funding from the EU Phare programme. The result of the application is still awaited but if successful, is likely to involve a few Polish delegates in seminars and site visits and 2 special editions of *In Practice*.

10th Anniversary Celebration

The 10th Anniversary of the Institute will be on 26th September 2001. The idea is to have a reception at the Royal Geographical Society on that day which exactly repeats the date and location of the inaugural meeting. The timing is likely to be 6.30 - 9.00 and members will be welcome but on a first come first served basis as the space is somewhat limited. Members who attended on that occasion were given a Founder Member's Certificate and it would be especially appropriate if as many of those Founder Members as possible could attend. Details on the arrangements are still being worked out and will be sent out to all members in due course

Autumn Conference and AGM

The next 2-day Conference and AGM will take place on 28 & 29 November 2001 and will be based at the Grand Hotel in Torquay. This is an excellent conference location with very good facilities at the Grand and plenty of opportunities for sight seeing the area. The local organiser is Eirene Williams who is putting together the excursions programme. Progress has been slightly slower in putting together the rest of the programme so the offer for Papers can be extended to 4th May. The themes will be River, Estuarine and Marine Issues - challenges for ecologist and environmental managers. This is a subject area that has plenty of aspects of interest, including Marine SACs and the ecological implications of the recent floods and possible new flood defence schemes.

Scottish Section

The next event for the Scottish Section will be the Meeting on 10th May which has already been circulated to Scottish members and is inserted in this Bulletin. It is worth saying that there is an element of uncertainty over the meeting because of FMD but at this stage it is going ahead. It promises to be a most interesting day on this most topical of Scottish themes.

North-East Shadow Section - Report of the meeting held on 30th January - Local Biodiversity Actions Plans

Keith Bowey is an inspirational speaker and he highlighted that a Biodiversity action plan is more than wildlife; it can encompass a spiritual element as well as economic. The key things are that Biodiversity action plans are plans for action, not for dusty bookshelves. He then demonstrated this by several examples; for instance, how the requirement for local provenance heather seed had led to a local Council offering part of its nursery to grow seed in pots. This has now led to surplus being sold to raise money to make the activity self sustaining.

There was considerable discussion of the role of various bodies and the ways the plans could be used and developed. Differences and similarities with Northumberland BAP and Newcastle BAP were highlighted. With regional government will local BAPS become rolled into a regional BAP or will we also have an additional Regional BAP?

The North Estate Shadow Committee would like to thank the support of the members over the last year and in particular, Durham Wildlife Trust and Northumberland Wildlife Trust for the support they have given to the group by offering their premises free. As we go to press, the March event had been cancelled because of FMD. Its is hoped to organise the event later in the year. The next date in May will still go ahead, even if FMD is still a problem but there will be no field visit.

Who's who on the Committees and what do they do ?

Much of the work of the Institute is carried on by the Committees. Many members may well be unaware of who serves on the Committees and the work they do, so this section is an attempt to make the governance of the Institute more open.

The key decision making body of the Institute is **Council**. Reporting to Council are a number of Committees which have delegated powers. The administrative year is arranged around three cycles of the Committees culminating in the final Council Meeting the day before the AGM. So each Committee meets three times a year with the exception of the Membership Admissions Committee which meets four times a year to ensure the smooth running and processing of applications. The Members of Council are elected annually at the AGM but Council does have the power to co-opt should this be necessary. The Chairman of Council is the President and, in his absence, the chair is taken by the Vice President. The purpose of Council is to consider the broader strategy of the Institute and provide guidance to the Secretariat and co-ordinate the activities of the various Committees. As, other than a General Meeting, Council is the only body which can approve changes in the byelaws, it does sometimes become involved in some very detailed issues.

The membership and functions of the Committees are shown below with the Chairmen marked in bold type.

The current members of **Council** are:

Mr Michael	Barker	mike.barker@southernwater.co.uk
Dr Peter	Beale	beale@eclipse.co.uk
Ms Sue	Bell	Sue.Bell@swkeurope.com
Dr Tim	Bines	tim.bines@english-nature.org.uk
Dr John	Box	jbox@wardell-armstrong.com
Prof Tony	Bradshaw	tonybradshaw@cableinet.co.uk
Mr Colin	Buttery	buttery@westminster.gov.uk
Dr Robin	Buxton	Robinbuxton@compuserve.com
Ms Carol	Crawford	TNRC@aol.com
Dr Stephen	Gibson	steve.gibson@jncc.gov.uk
Ms Jacqui	Green	gecco@flexnet.co.uk
Dr David A.	Hill	dhill@ecoscope.co.uk
Mr David	Jamieson	d.jamieson@btcv.org.uk
Ms Hilary	Ludlow	landscicon@tinyworld.co.uk
Mr William	Manley	will.manley@royagcol.ac.uk
Dr Patricia	Rae	patricia.rae@granherne.com
Dr Janet	Swan	jswan@rsk.co.uk
Dr Alex	Tait	Alex.tait@eastsussexcc.gov.uk
Ms Heather	Tidball	heather.tidball@middlesbrough.gov.uk
Dr Irene	Williams	ewilliams@plymouth.ac.uk

The **Finance and General Purposes Committee** is chaired by the President and its purpose is to run the administration of the Institute including property maintenance, staff relations, budget planning, book-keeping and audits, to prepare annual reports, to convene Annual and Extraordinary General meetings and to promote development in general of the Institute including fostering Geographic and Special Interest Groups within the membership.

Ms Sue	Bell	Sue.Bell@swkeurope.com
Mr Colin	Buttery	cbuttery@westminster.gov.uk
Mr Daniel	Gotts	daniel.gotts@snh.gov.uk
Dr David A.	Hill	dhill@ecoscope.co.uk
Mr David	Jamieson	d.jamieson@btcv.org.uk
Mr William	Manley	will.manley@royagcol.ac.uk
Mrs Jenny	Neff	info@eacs.iol.ie
Dr Janet	Swan	jswan@rsk.co.uk

The **Membership Admissions Committee** operates to promote membership of the Institute, vet applications for membership in accordance with the bye-laws, to supervise membership renewal and to prepare the Membership Directory.

Mr Michael	Barker	mike.barker@southernwater.co.uk
Dr Patrick	Coker	paddy@dryas.freeserve.co.uk
Ms Carol	Crawford	TNRC@aol.com
Mr A. Richard	Graves	arg@beck-ces.demon.co.uk
Ms Ann	Griffiths	ann.griffiths@westsussex.gov.uk
Dr David A.	Hill	dhill@ecoscope.co.uk
Dr David J.	Hill	d.j.hill@bris.ac.uk
Mr Robert	Mayhew	Robert.Mayhew@nnpa.org.uk
Mr Steven	Pullan	s.pullan@frca.maff.gsi.gov.uk
Dr Patricia	Rae	patricia.rae@granherne.com
Mr Paul	Rooney	rooneyp@hope.ac.uk

The **Professional Affairs Committee** works to review the Code of Professional Conduct, and the adherence of members to it and reports to Council where it considers there may have been a failure to do so. It also issues other appropriate guidelines on professional practice and to keep members informed of new developments and professional opportunities in the practice of ecology and environmental management.

Mr Nicholas	Baxter	nick.baxter@surreycc.gov.uk
Dr Tim	Bines	tim.bines@english-nature.org.uk
Mr Paul	Bradley	pba@tinyworld.co.uk
Dr Stephen	Gibson	steve.gibson@jncc.gov.uk
Ms Jacqui	Green	gecco@flexnet.co.uk
Dr David A.	Hill	dhill@ecoscope.co.uk
Mr Mark	Lang	markLang@wiltshirewildlife.org
Ms Hilary	Ludlow	landscicon@tinyworld.co.uk
Ms Sue	Swales	sue.swales@bromley.gov.uk
Dr Peter	Shepherd	bsg@dial.pipex.com
Dr Michael	Wells	Michael.Wells@npaconsult.co.uk
Dr Irene	Williams	ewilliams@plymouth.ac.uk

The **Training, Education and Career Development Committee** has the purpose of ensuring that adequate opportunities exist at all levels of education (academic and vocational) for helping those who wish it to obtain suitable qualifications for admissions to IEEM, and to develop a system of training for IEEM members which can be subject to periodic review for membership competence and upgrading.

Dr Peter	Beale	beale@eclipse.co.uk
Ms Elizabeth	Biron	somerc@compuserve.com
Dr Robin	Buxton	robinbuxton@compuserve.com
Dr Patrick	Coker	paddy@dryas.freeserve.co.uk
Mr Simon	Davey	srdavey@globalnet.co.uk
Dr David A.	Hill	dhill@ecoscope.co.uk
Mr Stewart	Lowther	stewartlowther@casella.co.uk
Ms Pamela	Nolan	pam.nolan@environment-agency.gov.uk
Mr Peter	Phillipson	Peter@telltale.Co.UK
Dr John	Rose	j.c.rose@shu.ac.uk

The purpose of the **External Affairs Committee** is to liaise with appropriate bodies, both within the UK and Abroad, especially in the European Community, monitoring external issues relevant to the Institute, in particular implications for the profession, and to represent the considered opinion of the Institute about these to private, government bodies and the general public. The Chair of the Committee is the Vice President, Dr Alex Tait. The structure of this Committee is currently under review and it currently does not meet on a regular basis but, under the Chairman, is the main means of contact with other Institutions and the discussions over the possibilities for closer working which are now taking place.

The Committee of the **Scottish Section** considers all matters as they relate to the activities of the Institute in Scotland. The Scottish Committee is represented on Council through David Jamieson, the Convenor and Carol Crawford, the vice-Convenor and on the Finance and General Purposes Committee through Daniel Gotts.

Mr Alan	Booth	alan@environmentalsurveys.co.uk
Mr Alister	Clunas	a.clunas@nts.org.uk
Ms Carol	Crawford	TNRC@aol.com
Ms Katharine	Dale	kd@northeastcol.co.uk
Ms Sarah	Eno	sarah.eno@snh.gov.uk
Mr Daniel	Gotts	daniel.gotts@snh.gov.uk
Mr Kim	Harding	hardingnrs.guest1@forestry.gsi.gov.uk
Mr David	Jamieson	d.jamieson@btcv.org.uk
Mr Neil	Redgate	consultancy@ndres.co.uk
Dr Una	Urquhart	una.urquhart@tesco.net
Miss Christine	Welsh	christine.welsh@snh.gov.uk

There is currently a shadow committee in the North-east of England and initial discussions on the formation of a shadow committee in the North-west.

There is a call made annually for members to participate in Committees and following this, those who have expressed an interest may be approached. Although there is no constitutionally prescribed size for the Committees, most work best at about 10-12. This virtually ensures that each meeting will be quorate (3 members are needed) but it does also mean that sometimes there are not opportunities for the members to join. In addition most of the Committees like to maintain a broad range of professional expertise so that there is usually enough expertise on hand to be able to deal with most issues. This may mean that one person may be selected in preference to another as a means of preserving or enhancing the balance of a Committee.

The Committees do tend to have very full agendas and there is usually no shortage of matters to consider - most Membership Admission Committees last over 4 hours, a reflection of the large number of applicants currently being processed.

The purpose of publishing this information about the Committees is to encourage better communication between the membership at large and the Committees and to encourage all members who are concerned about particular issues to raise them either with the Secretariat or the Chairman of the Committee concerned. If you

feel that the Institute is not providing a sufficient service in a particular field do please let your opinions be known. Also it will be helpful for the Institute to gauge the strength on feeling on particular issues if more comments and feedback is given. This is why we have given the email addresses of all Committee members. These in fact will also appear in the new Membership Directory but it was felt that, in this more accessible form, communication within the Institute might be improved.

For purposes of simplicity I have paraphrased the words used to describe the functions of the Committee in the Constitution. in fact most of the Committees interpret their roles quite broadly and deal with most issues within the spirit of their remit. As part of the exercise in going for charitable status there are likely to be a number of detailed changes required to the Constitution. As some of these may be in the Memorandum and Articles of Association, any changes will require the approval of a General Meeting. This could also be an opportunity to update the roles of the Committees. It is unlikely that an Extraordinary General Meeting will be called but that a revised Constitution will be put to the Membership at the AGM in November. At the moment there is no intention to alter fundamentally the purposes of the Institute which remain in many ways just as valid as they were 10 years ago.

The dates of the Committee Meetings in 2001 are:

- Council: 17th July, 27th November
- F&GP: 3rd July 30th October
- MAC: 19th June, 18th September
- PAC: 10th May, 4th October
- TECD: 7th June, 25th October
- External Affairs: to be arranged
- Scottish Section: under discussion

The venue is the Friends House, 173-177 Euston Road, London NW1 2BJ and most meetings other than the Scottish Section start at 13.30. Please note that the dates of Committee meetings are sometimes changed.

Some of the key items of work currently under discussion are:

- The programme for the Autumn Conference
- Revisions of the Constitution with a view to obtaining charitable status
- Discussions with other Institutions
- Development of approaches to CPD
- Increasing the Professional Issues Series
- Marketing the Institute
- Meeting the needs of members
- Developing further Geographic Sections
- European initiatives
- Increasing the number of members
- Publication of recent proceedings
- Improving the financial base of the Institute
- Monitoring the effects on the activities of the Institute's members of Foot and Mouth Disease

There is an overall programme for the Institute and monitoring of progress in meeting targets in the programme is undertaken by the Finance and General Purposes Committee.

Prospective members of IEEM

The following people have applied for membership of IEEM. 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 20th May 2001. Any communications will be handled discretely. The final decision on an admission is always taken by Council.

F=Full A=Associate

	Name	Category applied for	
Mr	Richard W.	Arnold	F
Miss	Helen F.	Ball	A
Miss	Diane J.	Barker	F
Dr	Jonathan A.	Barnard	F
Ms	Amanda L.	Best	F
Mr	Stephen	Bradley	F
Mr	Ian	Butterworth	F
Mr	Feliciano	Cirimele	A
Mr	Carl A.	Cornish	F
Mr	Robert R.	Craig	F
Mr	Andrew M.	Cross	A
Ms	Oda	Dijksterhuis	F
Ms	Eula	Eliades	A
Ms	Ann K.	Fells	F
Mr	Tobias T.M.	Fisher	A
Dr	Julie	Fossitt	F
Miss	Rachel J.	Hacking	A
Miss	Karen	Hall	A
Dr	Rachel A.	Hirst	F
Mr	Keith E.	Hutcheon	F
Mr	David	Ivison	F
Miss	Lorraine M.	King	F
Mr	Thomas	Knight	F
Miss	Amy L.	Medlicott	A
Mr	Kevin M.	Morgan	F
Miss	Jo-Ann C.	Mosley	A
Mrs	Carole J.	Newberry	A
Mr	Ewan W.T.	Nugent	F
Mr	Tristan L.	Owen	F
Miss	Helen S.	Powell	A
Mr	Martin C.	Robinson	A
Mr	Michael C.	Robinson	A
Mr	Timothy J.	Ross	A
Mr	Thomas T.	Sanders	F
Mr	Christopher I.	Slack	A
Mr	Paul D.	Smith	F
Miss	Victoria A.	Smith	A
Mr	Garry C.	Steele	A
Ms	Gillian L.	Thompson	F
Mr	William R.	Watson	F
Ms	Christine V.	Webster	A
Mr	Simon J.	Weymouth	A
Mr	Barry P.	Whittle	F
Dr	Janine	Wilkins	F
Mr	Robert	Yaxley	F
Mr	William	Yorke	F
Mrs	Linda	Yost	F

New Admissions to IEEM

IEEM is pleased to welcome the individuals listed below who have now been admitted as new members.

Name admitted	Grade
Mr Richard Andrews	F
Mr John Arundell	F
Mr Jeremy Bailey	A
Mr Mark Bates	A
Mr Michael Bird	A
Dr Edward Blane	F
Miss Katia Bresso	A
Mr Peter Brooks	F
Mr Barry Collins	F
Ms Sarah Coulson	F
Mr Terence Coul	A
Mr James Couzens	A
Dr Berenice Erry	A
Mr David Frost	A
Mr Roger Griffin	A
Miss Tessa Harding	F
Mr Colin Hedley	A
Ms Anne Heeley	F
Mr Alan Holmes	A
Mrs Elizabeth Johns	F
Mr Chris Kaighin	A
Ms Zoe Kemp	A
Miss Tessa Kilburn	A
Miss Lisa Kirman	A
Dr Bruce Lascelles	A
Ms Claire Leather	F
Dr Mark Linsley	F
Mr Trevor Mansfield	A
Mr Richard Marsh	F
Mrs Heather Marshall	F
Miss Kate Mastel	A
Ms Jane Orr	A
Miss Karen Passmore	F
Mr Mark H. Phillips	F
Ms Philippa Pickles	A
Mr Stewart Pritchard	F
Miss Margaret Savory	A
Mrs Wendy Scott	F
Mr Colin Shawyer	A
Mr John Sizer	A
Miss Nathalie Stevenson	F
Ms Jenny Storey	A
Dr Mark Webb	F
Mr Gordon Wright	F
Miss Amanda Craig	F
Mr Mark Doughty	F
Miss Tracy Edwards	F
Miss Susan Forster	F
Mrs Nicola French	F
Mr Peter Guest	F
Ms Helen Hamilton	F
Mr Damian Hughes	F
Mr Julian Jones	F
Mr Tony Serjeant	F
Miss Abigail Smith	F
Miss Sarah Stockley	F
Miss Katherine Stone	F

The following have successfully upgraded their membership from Associate to Full

The Course programmes for 2001 for the Centre for Alternative Technology, The 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 703743, Fax: 01654 703605, E-mail: joan@cateducation.demon.co.uk.

Field Studies Council: For a copy of the FSC Courses 2001 brochure, contact FSC head Office, Preston Montford, Montford bridge, Shrewsbury, Shropshire, SY4 1HW. Tel: 01743 850 674, Fax: 01743 850 178, E-mail fsc.headoffice@ukonline.co.uk.

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.u-net.com.

Plas Tan-y-Bwlch: Details from: Plas Tan-y-Bwlch, Maentwrog, Blaenau Ffestiniog, Gwynedd LL41 3YU. Tel: 01766 590324, Fax: 01766 590274, E-mail: Plastanybwlc@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: ETN@ukgateway.net

Other Courses/Events in the next few months:

26 April. The Ecological Context of Risk - Joint Meeting of the British Ecological Society and the Linnean Society The Linnean Society, London.

Details from: The Linnean Society, Burlington House, Piccadilly, London W1J 0BF Tel: 020 7434 4479, Fax 020 7287 9364

3 May. IEEM Course: Japanese knotweed and giant hogweed control. Warrington, Cheshire.

Details from the IEEM Office.

8 May. The Return of the Beaver Zoological Society of London London Zoo.

Details from: Deborah Body, scientific Meetings Co-ordinator Tel 020 7449 6227 E-mail deborah.body@zsl.org

9 May IEEM North East Section Meeting: The Turning the tide project: Durham Magnesium grassland re-creation.

2.00pm: Seaton Holme Visitor Centre, Easington
Details from: Steve Pullan, 20 Holystone Drive, Holystone Newcastle upon Tyne, NE27 0DH Tel: 0191 266 1769

10 May. National Parks in Scotland - a role for ecologists. Loch Lomond. IEEM Scottish Section Meeting.

Details available from the IEEM Office, Kathy Dale or the IEEM Website.

10 May. IEEM Course: Introduction to NVC surveying for Woodlands, Bedford Purlieus, Northamptonshire

Details from the IEEM Office.

15 May. IEEM Course: River Survey Techniques, Central Scotland
Details from the IEEM Office.

16 May. IEEM Course: Managing native broadleaved woods
Wye Valley & Forest of Dean.

Details from the IEEM Office.

23 May. Protected Species on Site - Planning and Dormice, Cheddar, Somerset.

Details from: The Mammal Society. Tel: 020 7498 4358

24 May. IEEM Course: Integration of conservation and agriculture (Arable farming). Oneholmes Farm, Stokesley, North Yorkshire.
Details from the IEEM Office.

31 May - 1 June. Seeds of Opportunity - The Role of Biotechnology in Agriculture. Location SOAS, London

Details from: Andrew Kendall Tel: 020 824 8681 Fax 0207 7301390 Email: andrew.kendall@kendallspr.co.uk

6 June. IEEM Course: Identification of grasses of limestone grassland in the vegetative state. Gloucestershire. **Postponed to Thurs 13th September**. Details from the IEEM Office.

12 June. IEEM Course: Basic Introduction to grasses. Settle, Yorkshire.

Details from the IEEM Office.

13 June. IEEM Course: Sand Dune Ecology and Management .

Merseyside

Details from the IEEM Office

24 - 28 June. Joint Meeting of the Geological Society of America and the Geological Society of London - Earth System Processes.

Location: Edinburgh

Details from: the Geological Society - www.geolsoc.org.uk -

Registration deadline: 30 April

26 June. IEEM Course: Taking grass identification further. Settle, Yorkshire.

Details from the IEEM Office.

29 June. British Ecological Society Forest Ecology Group - Field Meeting to consider the impact of recent forestry schemes in mid-Wales. Plas Tan-y-bwlch, Snowdonia N. P.

Details from: Keith Kirby, English Nature, Northminster House, Peterborough, PE1 1UA Tel: 01733 455245 Fax: 01733 568834

11 September. Applying New Technology to Conservation Management Information, Bath Spa University College, Bath
Details from Dr David Watson, Bath Spa University College, Faculty of Applied Sciences, Newton Park, BATH, BA2 9BN. Tel: 01225 875755. Fax: 01225 875776. Email: d.watson@bathspa.ac.uk.

26 September The IEEM 10th Anniversary. The Royal Geographical Society, London. Details to be available later.

11-12 October Autumn Members Day: New Legislative Instruments in Scotland. IEEM Scottish Section Meeting
Details to be available later.

19 October. British Ecological Society Forest Ecology Group - Conservation and management of the New Forest into the 21st Century, The New Forest.

Details from: Keith Kirby, English Nature, Northminster House, Peterborough, PE1 1UA Tel: 01733 455245 Fax: 01733 568834

28 & 29 November. IEEM Annual Conference and AGM - River, Estuarine and Marine issues - challenges for ecologists and environmental managers.

Location: Torquay

Details and Booking Forms available later from IEEM Office.