

Editor

Dearbhala Ledwidge
Design/lay-out
Cóilín MacLochlainn

**ESAI Council Officers
Chairperson:**

Dr Jim Wilson, Zoology Dept, TCD
Dublin 2, Tel: (01) 608 1640
Email: jwilson@tcd.ie

Vice-chairperson:

Dr Miriam Ryan, Enterprise Officer,
NUI Maynooth, Maynooth, Co Kildare
Tel: (01) 708 6019
Email: Miriam.Ryan@may.ie

Honorary Secretary:

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Laboratories, Glanmire Industrial
Estate, Glanmire, Co Cork
Tel: (021) 482 2288
Email: s.gallagher@consultus.ie

Honorary Treasurer:

Ms Sínead Macken, 3 Ashton Place,
Gardiners Hill, Cork
Email: sinead_macken@hotmail.com

Honorary Editor:

Ms Dearbhala Ledwidge
KT Cullen/White Young Green
(Ireland) Ltd
Bracken Business Park, Bracken Rd,
Sandyford Industrial Estate, Dublin 18
Tel: (01) 294 1717 Fax: (01) 294 1823
Email: dearbhala.ledwidge@wyg.com

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Dr Chris Emblow, ESAI Council Member and Director of Ecological Consultancy Services Ltd (EcoServe), reports on some interesting new EU-funded biological research projects

EU-funded biological research projects

BioCASE – A Biological Collection Access Service for Europe



BioCASE is a Research and Technological Development (RTD) project funded by the European Commission. Thirty-five institutions from 30 European countries and

Israel have formed a consortium to establish a web-based information service that will provide researchers and the public with unified access to biological collections in Europe, while leaving control of the information with the collection holders. Ireland's contribution to the BioCASE project is coordinated by Ecological Consultancy Services Ltd (EcoServe).

The BioCASE access system will foster scientific exchange and co-operation within and between the sub-disciplines concerned with biological collections. The term "Biological Collection" is understood in this case to include the following main categories: data collections used in floristic or faunistic mapping, survey, and monitoring projects; natural history collections as held mainly by museums and universities; living collections such as botanical or zoological gardens, seed banks, microbial strain collections and gene banks.

By supplying a common information base, the project aims at a high degree of integration. Through BioCASE, biological collections will become part of a European network and consequently also be integrated in larger and worldwide networks such as the Global Biodiversity Information Facility (GBIF). BioCASE will help to publicise the existence and aims of collections and should help to strengthen their viability.

An essential contribution to the BioCASE system will be rendered by institutions setting up and maintaining so-called National Nodes. The National Node is responsible for gathering data on national collections and relaying these data to the central BioCASE database. EcoServe, as the National Node for Ireland, is currently in the process of identifying and contacting potential Irish contributors to the BioCASE programme.

If you are a holder of biological collection data and you would like more information, you can visit the EcoServe website at www.ecoserve.ie and click on the 'Projects' button.

Further information will also be available at a workshop planned for the new year, details of which will also be available on the website

mentioned above. Alternatively, questions about the BioCASE programme can be directed to Brian Beckett, EcoServe, Unit B19, KCR Industrial Estate, Kimmage, Dublin 12. Tel: (01) 492 5711, email: brian@ecoserve.ie

BIOMARE - Implementation and networking of large-scale, long-term MARine BIOdiversity research in Europe



Consensus has shown that coordination at European scale is urgently required to implement long-term and large-scale marine biodiversity research and to plan and

adequately use the existing European research infrastructure.

Many research questions cannot be addressed at local scales, and require cooperation and the establishment of a committed network of scientists and institutes. There is no agreed common methodology for many aspects of biodiversity research: this needs careful preparation.

To address this, the BIOMARE project, a Concerted Action, was funded under the EU Energy, Environment and Sustainable Development Programme. The project ran for two years and finished in October 2002. The three main aims of the project were to achieve a European consensus on the selection and implementation of:

- a network of sites which could be used as a basis for long-term and large-scale marine biodiversity research in Europe;
- internationally-agreed standardised and normalised measures and indicators for biodiversity;
- facilities for capacity-building, dissemination and networking of marine biodiversity research.

Suitable sites were identified throughout Europe based on criteria such as research history, protection and the facilities and ability of scientists to carry out work there. In Ireland, eight sites were identified, including Lough Hyne and Roaringwater Bay, Kilkieran Bay, Mulroy Bay, Dublin Bay, Clare Island, the Saltee Islands, Kenmare River and Killary Harbour.

The final results on indicators and measures for monitoring marine biodiversity are being finalised, but provisional data is available from the project website (www.biomareweb.org).

MARBENA - creating a long term infrastructure for MARine Biodiversity research in the European economic area and the Newly Associated states



MARBENA is a follow-up project to BIOMARE. It will allow further development and implementation of this marine biodiversity

knowledge base. A further aim is to establish a strong and functional network of excellence that will not only focus on scientists but also on those who will use and benefit from this knowledge, such as decision-makers (politicians, civil servants, NGO leaders, planners, funding bodies, communicators, etc) and other shareholders of marine biodiversity information.

Ecological Consultancy Services Ltd are the Irish partners on these projects. For further information, please consult the BIOMARE (www.biomareweb.org) and MARBENA (www.vliz.be/marbenaf/) websites, or contact Chris Emblow (cemblow@ecoserve.ie)

COST-IMPACT



The European Union currently faces potentially conflicting objectives of maintaining sustainable fisheries in European waters with all the economic benefits afforded to the community through the fishing industry, whilst at the same time maintaining biodiversity and avoiding negative effects



Collecting seabed samples for the COST-IMPACT project

on the environment. To date, the economic arguments controlling fishing effort have focused on costs of fishing per unit catch and maintenance of sustainable fish stocks for the future. The current objectives of the EU are to control the environmental impact of fishing and to strike a balance between economic needs and protection of the environment.

COST-IMPACT (Costing the impact of demersal fishing on marine ecosystem processes and biodiversity), a project funded by the EU Quality of Life and Management of Living Resources Programme, hopes to address the extent to which demersal fishing impacts on the biodiversity of marine benthos and the associated goods and services, such as the nutrient cycling that they provide; and how these impacts influence other marine ecosystem processes.

In addition, COST-IMPACT aims to identify what the likely values of marine ecosystem goods and services are, and how these values are affected by fishing.

The project aims to help managers to integrate fishing policy with environment policy, and will provide tools that help determine whether a balance can be achieved between the economic value of a fishery and the impacts of fishing on marine ecosystems and the economic value of the goods and services they provide.

The project runs from November 2001 until December 2004 and culminates in a workshop in Dublin in March 2004.

Ecological Consultancy Services Ltd are the Irish partners on this project. For further information please consult the COST-IMPACT website (www.cost-impact.org), or contact Chris Emblow (cemblow@ecoserve.ie)

Online

Take control of the 'aNSwer'

By Laoise Davidson, aNSwer Management Team

The online environmental research database aNSwer and its sidekick EDS (Environmental Data Sources) are now the central focus of all environmental data in the island of Ireland. It is a resource that is long overdue in the eyes of many researchers. Since its launch in April, environmental research organisations are now signing up to take control of their information online at www.answer-online.org.

The North-South Ministerial Council (NSMC) was established as a forum for consultation, cooperation and joint action between governments north and south. At the NSMC environment sector meeting in June 2000, ministers agreed to promote greater cooperation in environmental research throughout Ireland and to bring together the main governmental bodies north and south to work together on common, Ireland-wide environmental issues.

As a result, the Environmental Protection Agency (EPA) in the south and the Environment and Heritage Service (EHS) in the north developed a joint register of current environmental research projects. This partnership has now entered a new and exciting phase with the development of aNSwer (a North-South Website of Environmental Research), which facilitates sharing of information on areas of mutual interest, assisting in identifying areas for cooperation on research and facilitating participation in joint initiatives that would qualify for European funding.

This interactive and dynamic website will enable researchers, research organisations and members of the public to access the joint register of environmental research projects and organisations in multidisciplinary fields across Ireland. A variety of features will be available on the site, including an open discussion forum, facilities to download reports, documents and audio/video files, to read up-to-date news items affecting Ireland's environment and read details of opportunities in environmental research across Ireland. Site members will even be able to propose their own news stories or advertise forthcoming events.

Caroline Irwin, appointed site manager for this first phase of development, is keen to point out the benefits of aNSwer/EDS: "Environmental organisations can add and manage their environmental research projects online, while other members can suggest news stories, events, links, glossary terms and funding opportunities. The site is all about cooperation, bringing together environmental resources from all over Ireland. A state-of-the-art discussion forum available on the site will enable researchers to share information and ideas."

- For further information see www.answer-online.org

Times Past

Dr Patricia Byrne has written an informative summary biography on the life and works of one of Ireland's most eminent natural historians, Richard Manliffe Barrington

**A note on an Irish naturalist and ornithologist
Richard Manliffe Barrington (1849-1915)**

Many Irish naturalists of the past are little known to the environmentalists of today, but their work has left us a valuable legacy. During the late 19th century, the collecting of plants, animals and minerals was a popular past-time for those with time and money on their side. Richard Barrington was one such man and, as his interests grew, he became one of the band of amateur naturalists who contributed to the growing knowledge of the distribution of the flora and fauna of Ireland.

Barrington was born on 22nd May 1849 at his family home of Fassaroe, Co Wicklow, the eighth and youngest son of Edward Barrington, landowner and Justice of the Peace, and the only son and eldest child of his second wife, Huldah (née Strangman). The Barrington family had a strong scientific leaning, his father having an interest in meteorological recording, which he carried out at the extensive Fassaroe farm. Richard was a delicate child with a keen interest in natural science and was educated mainly at home. He entered Trinity College, Dublin, and graduated in experimental and natural science in 1870. In 1875, he was called to the Bar, but soon found the life of a land valuer and farmer more to his liking. After the death of his father in 1877 he became more involved with the management of the family estate.

As an undergraduate, he had met Alexander J More of the Dublin Natural History Museum, who became a close friend and exerted a strong influence on him. He spent many weeks every summer on the islands, mountains and lakes of western and southern Ireland, gathering notes on plants and birds. His later reports on the flora of Lough Ree, Lough Erne, Ben Bulbin, Tory Island and the Blaskets were included in the second edition of More's *Cybele Hibernica* (1872).

Ornithology was another of his main interests, and in 1882, in the project he is best known for, he began correspondence with lighthouse-keepers around the Irish coast on the birds they observed. The work was funded by the British Association's migration committee until 1888, but after this he bore the expense himself. The results were published in *The migration of birds as observed at Irish lighthouses and lightships* (1900) and included many new records for Ireland. The specimens sent by the keepers were either passed on to the National Museum in Dublin or preserved in his 'beautifully-kept private

museum at Fassaroe, which he was always ready to show to his friends' (*Nature*, 1915). As well as islands off Ireland, he travelled to Iceland, remote islands off Scotland and to Switzerland during the 1870s and '80s. He also had a reputation as a mountain climber, having climbed many peaks in the Alps, including the Eiger (1876), and walked across the Rockies (1884). A member of the British Alpine Club, he made a record by ascending six peaks in the Alps within ten consecutive days. His brother Charles, as part of his grand tour of Europe, is reputed to have been the first person to ascend the Eiger in 1858.

In 1886, Richard, with William Spotswood Green of the Irish Fisheries Branch, organised an expedition to Rockall on board the Congested Districts Board steamer S.S. *Granuaile*, the aim being to note and preserve specimens of biological and geological interest and investigate the possibility of siting a meteorological station on the rock. The other naturalists on board were William de Vismes Kane, Henry Jameson, Robert Lloyd Praeger and J.A. Harvie-Brown, who, with Barrington, covered half the expenses. The team failed to land due to high seas, but were the first to observe the birdlife of Rockall. A weather station was deemed impracticable.

Barrington's interests were wide and included native mammals, agriculture and meteorology, as well as Irish science and economics. He contributed to several journals and was also an active member of several societies, including the RDS, RIA, Royal Zoological Society of Ireland and the Irish Society for the Protection of Birds, and he was one of the founders of The Dublin Naturalists' Field Club.

In 1897, he married Lena Gyles, daughter of Captain Gyles of Kilmurray, Co Waterford. It is said that the Fassaroe museum was her suggestion.

Barrington was known for his personal charm and kindly sense of humour and held friendships with many of the noted Irish

naturalists of the time. Once, he made a wager of £50 with the botanist H.C. Hart to walk from Dublin to the summit of Lugnaquilla and back in less than 24 hours, a distance of 75 miles. He lost his bet.

He retired from his Land Commission work in the spring of 1915 and died later that year - on 15 September 1915 at the age of sixty-seven years - while driving home from Dublin with his son.

His herbarium is at the National Botanic Gardens, Glasnevin, and a list of his publications is found in *The Irish Naturalist* (1915). The museum at Fassaroe no longer exists.

- Entries on Richard Manliffe Barrington (1849-1915) and other Irish naturalists will be found in the Royal Irish Academy's *Dictionary of Irish Biography*, due to be published in 2005.

- For further information contact Dr Patricia Byrne at pzbyrne@gofree.indigo.ie. Patricia is a council member of ESAI. With a background in biological oceanography, she works as a freelance marine biologist and is contributing biographies on Irish scientists to the *Dictionary of Irish Biography*.

Bibliography

Rev W Spotswood Green (1896). Notes on Rockall Island and Bank; narrative of the cruise in 1896. *RIA Trans.*, Vol. XXXI (1896-1901), 39-47.
The Irish Naturalist, (1915), 193-206.
Nature (1915), 96, 119.
Robert Lloyd Praeger (1947). The way that I went.
Robert Lloyd Praeger (1949). Some Irish naturalists: A biographical note-book.
Ray Desmond (1994). Dictionary of British and Irish botanists and horticulturists.

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Endocrine-disrupting compounds in the Irish environment

Dr Concepta Brougham, Athlone Institute of Technology, reports on the first all-Ireland workshop investigating the effects of EDCs in the Irish environment



Hormones in the water? (Science News, Jan 22 1994)

Environmental scientists have investigated the impact of synthetic and natural chemicals in the environment for many years. Signals from humans, fish and wildlife populations, with evidence from experimental toxicology, have led to an emerging hypothesis that the normal operation of the endocrine system can be disrupted by a range of oestrogen disruptors.

The observed detrimental health effects and their link with xenoestrogens are tempered by the lack of appropriate technology to highlight this ever increasing problem.

Oestrogen mimics include natural and synthetic hormones, pesticides, industrial chemicals used in the manufacture of paints and detergents, phthalates from the plastics industry, and many pharmaceuticals. They have been identified in industrial and domestic sewage effluent, leachates from solid waste disposal sites, agricultural leachate, urban run-off and atmospheric fall-out. Freshwater fish have been found to be affected by oestrogen mimics arising from sewage treatment plant effluents. Oestrogens have also been implicated in contributing to low sperm counts in healthy adults and in various cancers of the reproductive system. For humans, the link between environmental oestrogens and the increasing incidence of breast cancer is well-documented.

A workshop on 'Endocrine Disrupting Compounds in the Irish Environment' was held at the Athlone Institute of Technology on 9th May 2002.

Researchers from Athlone Institute of Technology, Cork Institute of

Technology, University College Cork, Dublin Institute of Technology, University of Ulster, Limerick Institute of Technology and Sligo Institute of Technology presented their findings on the detection and identification of low level EDCs, *in-vivo* and *in-vitro* biological assays and the photocatalytic removal of EDCs in water.

Technical and strategic discussions ensued, from which the following objectives were agreed:

- The need for a national forum on endocrine disruptors;
- A collaborative approach to research whereby:
 - niche areas were established;
 - areas of expertise were identified;
 - a national network was established for the monitoring of endocrine disruptors in waste treatment analysis and for the re-registration of chemicals;
- The opportunity for collaborative funding and to project this through TECNET.

Following this EDC workshop, endocrine disruptors were included as a thematic area in BIONET with a view to fostering communication between researchers and to build multidisciplinary teams.

- Anybody with an interest in this work should contact: Dr Concepta Brougham, Athlone Institute of Technology, Dublin Road, Athlone, Co Westmeath. Tel: (0902) 24434, email: cbrougham@ait.ie

Marine algae against global warming?

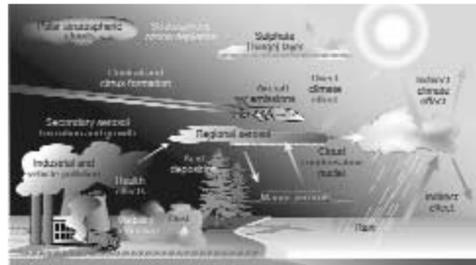


Figure 1 Aerosols — the big picture. Industrial and vehicle exhaust emissions, windblown dust, and sea spray are all sources of primary aerosol particles. Secondary aerosol particles are produced in the atmosphere from gaseous pollutants in exhaust emissions, and emissions from land vegetation and marine organisms. Photochemical processes in urban smog produce high levels of secondary particles; however, not all significant levels stem from similar processes higher in the atmosphere. Atmospheric particles have varying effects. Biomass emitted as pine stratospheric clouds, and in the lower-troposphere sulphates (aerosol haze), result in ozone depletion. Photochemically produced particles of sulphuric acid, and nitric acid, lead to acid deposition. Fine aerosol particles of both primary and secondary origin can affect human health, reduce visibility, and influence climate both directly and indirectly. Particles and processes associated by aerosols in the upper troposphere and stratosphere can have a disproportionate effect, because these regions are not heavily polluted by ground-level emissions. The seriousness discussed by O'Dowd et al. might be an important over-burden to the marine aerosol layer, and especially the tropospheric layer. Irregularly shown sea-salt aerosols are fairly large and are generally not transported far above the surface.

By Prof Colin O'Dowd, NUI-Galway

A team of EU-funded and Irish-led scientists have discovered a new link between marine algae and climate change. They have found that iodine vapours, released from algae or plankton, condense to form aerosol* particles over oceans. These aerosols can have a significant impact on climate change as well as on precipitation patterns, as aerosols work in a manner opposite to greenhouse gases (greenhouse gases trap heat escaping from the Earth's surface – "global warming" – while aerosols block heat from reaching the surface where it is absorbed - "global cooling").

This new discovery involving iodine vapours represents a major breakthrough in the prediction of climate change, as no current prediction model takes this fact into account.

Everybody knows that aerosols are affecting the ozone layer, human health, acid rain and also climate change. In fact, atmosphere aerosols have an important influence on climate regulation since they contribute to the Earth's "heat shield" through the formation of haze and cloud layers.

While all aerosol types contribute to the "heat shield," marine aerosols formed over oceans are its most important source, as the oceans cover over 75% of the Earth's surface.

While previous research had linked algae and plankton to climate change, through sulphur vapours forming aerosols, this new research has shown that iodine oxides drive the aerosol formation process.

How is this new source of marine aerosols (iodine oxides) explained? Increasing oceanic biological activity (of algae or plankton), resulting from changes in ocean temperatures, can lead to increased iodine vapour emissions which, in turn, can lead to an increased abundance of aerosol particles. The iodine vapour released from algae is in the form of methyl-iodine molecules, which react with sunlight and ozone to produce iodine-oxide aerosol particles.

Thus, increasing the availability of aerosols will increase the solar-blocking efficiency of the haze and cloud layers. Such a trend comprises a global cooling effect that could partially offset global warming from greenhouse gases. Also, an increased abundance of aerosols will lead to a reduction in precipitation, and therefore longer-lived clouds, further adding to the effect.

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*Aerosols are solid particles or liquid droplets suspended in the air. They are produced by combustion processes, condensation of vapours, and mechanical disruption of the Earth's surface, and can range from 1 nanometre in size to many microns. Aerosols produced from vapours are typically 1 nanometre in size and these new aerosol particles grow to sizes approaching 1 micron where they can act as seeds for cloud formation.

Experimental field studies into the phenomenon were made on the Irish Atlantic coast, at NUI-Galway's Mace Head Atmospheric Research Station. Now the researchers are investigating whether this transformation occurs on a larger, oceanic scale. In this regard, the research team (EU project PARFORCE) (website: <http://macehead.nuigalway.ie/parforce>) led by Professor Colin O'Dowd (National University of Ireland, Galway, & University of Helsinki), and comprising a total of 15 research groups and dozens of scientists from Ireland, Finland, Sweden, Germany, UK and The Netherlands, have also collaborated with US scientists from the California Institute of Technology to unravel the new process producing marine aerosols.

This new discovery was reported this summer in *Nature*, the premier journal worldwide for reporting ground-breaking news of global importance. A further 16 scientific articles were published in a special issue of the *Journal of Geophysical Research – Atmospheres* this autumn.

- For further information see <http://macehead.nuigalway.ie/parforce>

You've got your degree in environmental science: what now?

Trudy McMurray addresses career options open to students of environmental science. Trudy, the Student Liaison Officer for the ESAI, is a PhD student at the University of Ulster

The multidisciplinary nature of an environmental science degree enables graduates to acquire a broad range of skills. Skills developed during a science degree include scientific research and field survey techniques, data analysis and understanding the information requirements of environmental issues. Science students acquire well-honed computer skills and the ability to communicate with, and integrate knowledge from, a range of subject disciplines, all relevant in a wide range of employment. In addition, many other interpersonal skills are acquired, such as teamwork and the ability to present work, whether written or oral.

There has been an increase in the range of careers where an environmental science degree is one of the required disciplines. Also, the range of subjects undertaken in the degree enables graduates to consider a wide

range of careers. A small percentage of graduates decide to specialise by undertaking further study, while others enter a wide range of employment. Areas of employment vary greatly, with opportunities in public health and consumer protection, environmental consultancy, environmental health, physical resources, environment/property and construction, the water industry, right through to teaching and lecturing. In addition, environmental scientists have valuable, sought-after skills for commercial/managerial and graduate trainee positions. Choosing a career involves more than just finding out what is open to you - you can discover your individual values, interests, abilities and skills in order to relate career options to yourself.

- This article originally appeared on the website prospects.ac.uk

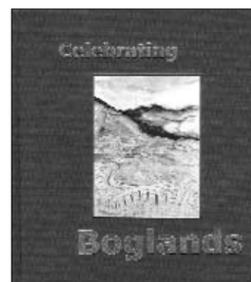
Articles welcome

EnviroNews welcomes articles and photographs relevant to the environmental sciences in Ireland. EnviroNews also welcomes your letters, comments and suggestions. Please write to the Editor

Publications



Pauline Bewick, who launched the book *Celebrating Boglands*, with Fiona Fallon, who modelled her dress inspired by bogs



Séamus Caulfield, Éamon de Buitléar, Peter Foss, Seamus Heaney, Neil Lockhart, Fiona MacGowan, Catherine O'Connell, Julian Reynolds, Tim Robinson, Trevor Sargent and Michael Viney.

The book is available from IPCC, 119 Capel Street, Dublin 1, for €35 including postage and packing. Tel: (01) 872 2384 Email: bogs@ipcc.ie

National Heritage Plan

The former Department of Arts, Heritage, Gaeltacht and the Islands produced a number of reports prior to the summer general election and reshuffle of departments, including the long-awaited National Heritage Plan

This is the first National Heritage Plan for the Republic of Ireland. It sets out a strategy and framework for the protection and management of heritage over a five-year period, from 2002 to 2007. Heritage, in the context of this plan, includes natural heritage, heritage in the countryside, natural and cultural landscapes, archaeological and architectural heritage, moveable, documentary and archival heritage and inland waterways.

The plan identifies a range of measures to be undertaken, and identifies additional financial resources of €123.16 million which the government has committed to achieving the aims of the plan. It also identifies mechanisms for monitoring and review.

It is stated in the plan that its success will "depend entirely on the enthusiasm with which its objectives and actions are embraced by individuals, communities, volunteer and professional organisations, the private sector, local authorities, statutory bodies and by all levels of government."

The Plan is available from Government Publications, €10.

D.L.



Into the West

Research Colloquium in NUI Galway in January 2003

The 13th Irish Environmental Researchers Colloquium - *ENVIRON 2003* - will take place in the National University of Ireland, Galway, from Wednesday to Friday, 8th, 9th and 10th January, 2003. It will be officially launched by Éamon de Buitléar on Wednesday at 7:00pm. The launch will be followed by a reception.

The conference will feature a range of oral and poster presentations on a variety of themes including air, water, environmental monitoring and analysis, waste and waste management, marine and coastal research, agriculture and forestry, ecosystem management, and society and economy.

Prizes for best oral and best poster will be sponsored by the ESAI. COFORD will sponsor prizes for the best oral and poster on the theme of forestry.

Registration will include tea/coffee and lunch for



both full days of the colloquium (Thursday and Friday). The conference dinner will take place at the Galway Bay Hotel, Salthill, at 8:00pm on Friday evening (10th January).

"Beers and Careers," an informal environmental careers advice session, with complimentary drinks, will be held from 1:00-2:00pm on Thursday, 9th January. All students are welcome.

Technical sessions will be held on Thursday and Friday. Proceedings will end at approximately 5:00pm on Friday.

- Further information and a registration form can be found on the colloquium website at: www.nuigalway.ie/eci/environ2003

Last year's Colloquium prizewinners

NUI-Galway postgraduates took the awards for best poster and best oral presentations at the 12th Irish Environmental Researchers Colloquium at UCC on 25-27 January 2002. James Moran, who is working under the supervision of Dr Mike Gormally (ECI Biodiversity PRA), gave a talk entitled "Monitoring the effects of grazing on the biodiversity of a selected turlough in the west of Ireland." Patricia Timmons is working under the supervision of ECI Director and Chair of Microbiology, Prof Emer Colleran. Her poster was entitled "An investigation into the effectiveness of heat treatment in reducing the human and animal health risks involved in the re-use, recycle and disposal of sewage sludge and animal manures"



Patricia Timmons (Best Poster Presentation) and James Moran (Best Oral Presentation) at the 12th Irish Environmental Researchers Colloquium in NUI-Cork last January

(Environmental Change Institute (ECI) at NUI-Galway)

Beers and careers

An informal careers session will be hosted by the ESAI at the forthcoming Environmental Researchers Colloquium at NUI Galway. The session will be held from 1:00-2:00pm on Thursday, 9th January 2003. Students will have the opportunity to meet with and talk to professionals working in the field on environmental science. The professionals will outline their field of work and answer questions in this informal session. Complimentary drinks will be provided.

ESAI AGM

The ESAI AGM will be held at the Environmental Researchers Colloquium on Thursday, 9th January 2003, at NUI Galway.

The AGM will include an open discussion providing an opportunity for ESAI members to influence the work of the Association, and a new Council will be elected. All members are urged to attend.

Call for new Council Members

There are a number of vacant ESAI Council posts to be filled at the forthcoming AGM. ESAI members who wish to play an active role in the Council are encouraged to stand for election. Anyone who has been a member for at least one year and is nominated by two members is eligible to apply.

If you would like to become a Council member, please leave your name and details with any member of the ESAI Council before the start of the AGM. Any Council member will be happy to answer any queries or questions which you may have regarding nomination, etc.

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