



ESAI web address: esaiweb.org

Newsletter of the Environmental Sciences Association of Ireland - an association for people working in the environmental area

ESAI Annual Colloquium **ENVIRON 2009**

15-17th January 2009
Waterford Institute of Technology
and Teagasc, Johnstown Castle

Keynote Speaker:
Prof. David Bellamy



NOTICE FOR EGM 27th June 2008

Venue: ENFO Offices, Dublin
Time: 2.30pm

ESAI Council are currently constructing a memorandum and articles of association (M&A) to form a not for profit organisation; Environmental Sciences Association of Ireland; ESAI. On completion, these documents will be sent to members for review in June. We will form a limited company under guarantee with no share capital. An Extraordinary General Meeting (EGM) is required to approve these new documents into the ESAI constitution. On approval of M&A, Council Officers will become directors of the not for profit organisation with some council members as members.

All members are welcome to attend however booking is essential due to room size. Please contact Sinead at administrator@esaiweb.org

NEW WAY FORWARD FOR CONFERENCE REGISTRATION



ESAI is creating a new online booking system. The new system will enable the ESAI to setup and completely manage bookings for numerous conferences, including Environ '09, through its website www.esaiweb.org. The system will promote the ESAI website as a conference hub through which conference delegates may register online via credit card payment. Not only will the facility take into account any discounts applicable to ESAI members, it will also allow delegates to join the ESAI at the time of conference registration. Those registering will be able to register as a delegate, speaker, poster or chair, in addition to reserving their place at the conference dinner. Once registered, the website will facilitate the uploading of presentation and poster abstracts which will then be managed by ESAI conference coordinators. The system will also permit the conference coordinators to easily keep registered delegates informed on upcoming events and deadlines via email. Attik Designs (www.attikdesigns.ie), who designed, maintain and manage the ESAI website are currently developing and implementing this software, which is based on programming from Solved.ie (www.solved.ie).

Part funding was provided by the EPA to upgrade the website. The ESAI would like to take this opportunity to express our gratitude to the EPA for this much needed software.

ESAI: Promoting Professional Development through Education

ESAI 2008

Photography Competition "Human Impact on Nature in Ireland"

Closing date Friday Sept. 26th 2008
(see page 7 for details)

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EnviroNews

ENVIRONNEWS is published by the Environmental Sciences Association of Ireland (ESAI) and distributed free to members. Names and addresses of members are not provided to commercial concerns.

ESAI Council Officers

Chairperson:

Dr. Shirley Gallagher
20 Coppervalley View, Glanmire, Co. Cork.
Tel: 021-4823169
Email: sgallagher@enviroskillnet.com

Vice Chairperson:

Currently vacant

Honorary Secretary:

Dr. Brian Quinn, GMT Dublin Road, Galway.
Email: quinnbrian@gmail.com

Honorary Treasurer:

Dr. Paul Bolger,
Environmental Research Institute, University College Cork, Lee Road, Cork.
Email: p.bolger@ucc.ie

Website Co-ordinator:

c/o Dr. Adrian Corcoran
Email: webmaster@esaiweb.org

Student Liaison Officer:

Mr Vincent Carragher, Lonsdale Building, Centre for Environmental Research, University of Limerick
Email: vincent.carragher@ul.ie

Stand-In Editor:

Dr. Catherine Dalton

ESAI Council Members:

Dr. Thomas Curran
Environmental Engineering Group,
Earlsfort Terrace, Dublin 2.
Email: tom.curran@ucd.ie

Dr. Alice Wemaere
EPA, McCumiskey House, Richview, Clonskeagh
Road, Dublin 14.
Email: A.Wemaere@epa.ie

Dr. Michael Williams
Dept. of Botany, School of Natural Sciences,
Trinity College Dublin, Dublin 2.
Email: willismm@tcd.ie

Michael Ewing
Centre for Sustainability, Sligo Institute of Technology,
Ballinode, Sligo.
Email: ewing.michael@itsligo.ie

John Wann
Aulino Wann & Ass., 34 Windsor Avenue, Whitehead,
BT38 9RX, Co. Antrim.
Email: john@aulinowann.com

Claudine Nelan
Email: claudinenelan@hotmail.com

Louise Farrell
Email: louise Farrell@hotmail.com

Conference Coordinator:

Laura Kirwan, Teagasc Environmental Research
Centre, Johnstown Castle, Wexford.
Email: laura.kirwan@teagasc.ie

Public Relations Officer:

Dr. Brian Quinn, (GMT).
Email: quinnbrian@gmail.com

Administrator:

Sinead Macken, Stonehaven, Moy Road, Kinvara,
Co Galway Tel: 086-8071498
Email: administrator@esaiweb.org

ESAI Membership Subscriptions:

€50 waged; €25.00 unwaged
(Contact Administrator)

ESAI Strategy Review

The ESAI Council will be conducting their annual strategy review workshop on September 24th, 2008 in Dublin. Like any organisation the ESAI will only continue to be a successful organisation if it has an appropriate strategy that meets the needs of its members. The ESAI's first strategy workshop was held in November 2007 and was chaired by Andy Friedman, Director of the UK based Professional Associations Research Network. The workshop, which was attended by past and present Council members, reviewed where the association is now, its strengths & weaknesses and potential opportunities for the association in the future. One of the outcome decisions of the workshop was to broaden the base from which the Council draws its members so that the ESAI can extend its membership to environmental professionals. The Council is fortunate to have a number of new members from backgrounds other than academia this year and it is hoped that this will assist the association in broadening its membership base and remit.

The annual strategy review is an open participative process in which ESAI members are encouraged to engage and we would really appreciate hearing from you as to where you think the ESAI should be going & what you think the Association should be providing to you as an environmental scientist. We have already consulted with many of our members at ENVIRON 2008 via a questionnaire. If you have any comments on the future strategy of the ESAI, or would like to attend this year's workshop, please email Ms Sinead Macken at administrator@esaiweb.org

Environ 2006 Selected Papers

are now available on-line check out <http://www.esaiweb.org/coll.php>

Environ 2008 Student Prize winners

Environ2008 was held in Dundalk IT in February. It was a well-organised, well-attended event, for which ESAI would like to thank the local committee for a job well done especially Dr.

Suzanne Linnane, Dr. Siobhan Jordan and Dr. Valerie McCarthy. Our thanks to the keynote speakers, Duncan Stewart and Dr. Ken Irvine of TCD.

The winning student presentations chosen by the ESAI were as follows: Best Overall Oral Presentation went to Heather Lally, NUI Galway for her talk "Lake Creation - A major post-harvesting land-use option for wildlife conservation on used industrial Irish peatlands." Best Overall Poster Presentation was awarded to Mary Garvey, Athlone IT with her poster entitled "Pulsed UV light inactivation of *Cryptosporidium* spp. oocysts in drinking water supplies in Ireland." Best Forestry Oral Presentation was presented to Howard Fox, TCD for his talk on "Ground Epiphyte diversity in native and plantation forests." Best Forestry Poster Presentation was given to Rebecca Martin, UCC with her poster entitled "Assessing the biodiversity of canopy arthropods in a range of forest types". Finally Best Soils Presentation went to Samuel Dennis, Teagasc for his talk on "Nitrous oxide emission from soils reduced using DCD nitrification inhibitor." Articles from each winner giving an overview of their project are available on-line.

Our sponsorship for prizes was at an all time high this year with €1,250 to present to students. Many thanks to the continued support from our sponsors COFORD and the Soil Science Society of Ireland.



Shirley Gallagher presents Heather Lally with the award for Best Overall Presentation at ENVIRON 2008

The Irish Water and Wastewater Exhibition (IWWE) at the RDS in March was the scene of the second year of the ESAI's water workshop. This year's event examined the status of Ireland's application of the Water Framework Directive (WFD). The directive was transposed into law in 2000 and speakers and delegates evaluated our status and where we need to go in order to ensure we meet the target of good status in all waters by 2015 [stages required for 2015-all waters to have good status]. This year's event was co hosted by EnviroSkillnet, a new network for environmental professionals (www.envirokillnet.com). There was standing room only on both days and the speakers were inundated by questions which highlighted the interest and relevance of the workshop. Delegates ranged from students, to local authority personnel to a range of water related industries as well as farmers, politicians, NGO's and economic advisors.

The first day examined policy and standards and the bigger picture. **Dr Jim Bowman**, EPA gave an excellent overview of the status quo in Ireland with respect to the Water Framework Directive in 2008. He indicated that Ireland is still ahead of the other European countries but there was no time to rest on our laurels. The only blip at present is the lack of marine data, which is under the jurisdiction of the Marine Institute in our report to Europe which is sent by the EPA.

Dr Colin Byrne, from the Department of Heritage, Environment and Local Government followed with a breakdown of the daughter directives, with many new directives requiring serious manpower in order to ensure compliance. Representatives from a number of local authorities raised concern at the heavy workload being placed on their shoulders with no apparent increase in resources. There are serious challenges ahead and cost implications. The River Basin District project offices are wrapping up, as the projects will be complete by the end of 2008. **Sean O Breasail**, SWRBD summarised the situation for the local authorities and the project offices, stating there are a number of steps in situ to ensure that there is a smooth transfer from project office to local authority, however a number of further steps are required to ensure the plan created by the project offices can be adopted by the local authorities. **Dr Suzanne Linnane**, DKIT National Centre for Freshwater Studies discussed her work on source water protection. She stated that public participation and awareness were 'crucial to the success of the project' and highlighted simple ways of making it work. **Mr Declan Egan**, Fehilly Timoney & Associates, wrapped up the day by drawing our awareness to another new standard, strategic environmental awareness (SEA).

Day two, examined in detail, practicalities and procedures in determining what is good status in water. The morning began with two speakers from the newly privatised Northern Ireland Water (NIW). **Mr Brian Mc Calmont** highlighted the improvements made to leakage of drinking water in the NIW network and **Ms Dymphna Gallagher** discussed quality and water safety plans and the NIW's response to the need to protect sources of drinking water. **Dr Bruce Howard's** research plan to remove nitrates by using packed channels of organic materials was a new concept, currently on trial in Northern Ireland and a number of European countries. **Ms Anne Marie Crowley**, NSAI gave an entertaining account of the practicalities of creating an ISO standard as well as the difficulties in the current layout of standards

in wastewater and the implications in the Irish context and the voting implications of the 'big 6'. **Mr Paul Shaffaer**, from CIRIA gave an account of Sustainable Urban Drainage Systems (SUDs) and a case study in the UK. **Dr Brian Quinn**, GMIT spoke about his research on identifying endocrine disrupters with biomarkers. These are in response to the need for a fast, responsive and efficient tool to detect these ubiquitous compounds. **Dr Eleanor Jennings**, TCD discussed some findings from the ILLUMINATE project which is utilising palaeolimnology, the study of lake sediments, and computer modelling to examine catchment pressures and responses under future climate and management scenarios. **Mr Pascal Sweeney**, Sweeney Consulting, reviewed the importance of freshwater invertebrates as indicators for determining good status of waters. He reviewed the use of Q Indices as developed by the EPA and also the Small Stream Risk Score (SSRS) developed by the WRBD.

Presentations will be available in the near future on line and on CD contact Administrator@esaiweb.org for further details. There will be a nominal charge for CD.



Shirley Gallagher, ESAI

INNOVATION LOUNGE

The largest national environmental exhibition in water products had an intriguing new feature, the innovation lounge. It was where industry met academia and chatted informally about current research projects and a glimpse of the technologies of the future.

As someone who has spent her working life in industry, Chairperson of ESAI, Dr Shirley Gallagher has believed for some time that industry and research should be more closely linked. The practicalities required when applying innovative products to practical situations can often lead to gaps, which may slow down any further innovative ideas. The innovation lounge was setup to aid academic institutions to showcase innovation in sustainability, environmental protection and products to ensure the environment is sufficiently protected. She added that while many academic fora already exist to promote such ideas 'the concept that industry may be interested in research and innovation in new environmental areas is new'. Dr Gallagher explained that the innovation lounge brought another layer to the IWWE by highlighting new technologies and showcasing what is happening in Irish universities and colleges in the mid to late stages of research. The majority of universities and colleges now have technology transfer departments, which spawn start-ups and potentially high-growth companies in many areas including the environment. The lounge was seen as a platform where potentially innovative products which are close to becoming commercial products can be linked to potential buyers. IWWE has products and delegates from Europe and beyond, with over 2000 delegates each year, so it's an ideal location to set up a stall. With new technologies playing a vital role in pushing forward the concepts of environmental protection, we expect the Innovation Lounge will have a key role to play in showcasing novel Irish designed environmental products.

Lake Creation: A major post harvesting land use option for wildlife conservation on used industrial Irish peatlands

Heather Lally

Environmental Microbiology Research Unit, National University of Ireland, Galway



I am currently in the third year of my PhD at NUI Galway where I am investigating the artificial creation of lakes on cutaway peatlands in the Irish midlands. The study focuses on four lakes created within the Lough Boora Parklands in Co. Offaly. The parklands consist of 2000ha of which Bord na Móna have created 400ha of experimental waterbodies. The parklands is an important refuge for flora and fauna alike with six angling lakes, 13 conservation wetlands and large areas of commercial forestry and scrub/ natural grasslands. This is one of the largest habitat creation opportunities to emerge in Europe in modern times. The four lakes being investigated are 1) Clongawny: the youngest of the study sites created in 2001, with an area of 12ha

and a depth of 1m, 2) Drinagh: created in 1999, the largest of the study sites with an area of 186ha and a depth ranging from 2 – 8m, 3) Tumduff Mór: created in 1997 with an area of 40ha and depth of 1 – 2m and 4) Turraun: the oldest of the study sites created in 1991 with an area of 60ha and depth of 2m. Sampling began in February 2006 to obtain baseline data on their water quality and trophic status. Samples are taken monthly at two opposite sampling stations at each lake. On-site parameters of pH, dissolved oxygen, conductivity and temperature were taken using a WTW Multi-line field kit. On return to the laboratory other analyses were carried out: colour, turbidity, BODs, humic content, total dissolved solids, chlorophyll-a, silicates,

nitrogen and phosphorous. It is hoped this base line data will give an idea of what processes are taking place within the lakes.

This coming summer I am hoping to carry out habitat mapping around the four study lakes to assess their conservation potential. The lakes will be mapped according to the Heritage Council – Habitat Survey Guidelines using Fossitt 2000. Habitat maps will then be produced using GIS Arc 9.0. It is envisaged that this study will provide guidelines to maximise the conservation value and biodiversity potential of future cutaway peatland lake creation projects.



Vegetation at Drinagh Wetland

Lapwings at Turraun wetland

Swans at Tumduff Mór Wetland

Bare peat at Clongawny Wetland

Publication of selected papers from Environ 2008

As you already know the ESAI have published selected proceedings from Environ since 2005. ESAI intend to publish selected papers from Environ 2008 and are currently **inviting student presenters to make a submission** (one per student). Independent referees will assess papers submitted for publication before they are accepted and the ESAI welcomes anyone who would like to apply to referee papers (contact administrator@esaiweb.org). These papers will be produced to a fully professional standard and we thank Prof. Richard Moles who has again agreed to take on this task. We will endeavor to ensure accuracy etc. and we ask delegates to accept their work may be published beforehand.

DEADLINE FOR SUBMISSIONS IS JULY 1st 2008

All details are available on-line see www.esaiweb.org including; a **copyright form** which needs to be filled in and returned in hardcopy, **instructions for authors** for your reference, a **sample paper** to act as a guide and selected proceedings from Environ 2005 and Environ 2006. Environ 2007 proceedings will be available shortly.

Archive Digitisation Projects:

Digital Darwin

In the run-up to the great Charles Darwin anniversary next year (200 years since he was born, 150 years since Origin was published), there are now several good websites, including a stunning online archive of nearly 100,000 pages of manuscripts, notes, photographs and sketches, including his first draft of the theory of natural selection

<http://www.darwin.rcuk.ac.uk/>

<http://www.guardian.co.uk/science/darwinbicentenary>

<http://darwin-online.org.uk/>

The FitzGerald Letters

A new RDS project on its collection of letters by noted Irish physicist, George Francis FitzGerald (1851-1901). Professor of Natural and Experimental Philosophy at TCD, and a member of the RDS, among other noted contributions, he famously was the first person to suggest, in a letter to Nature, that perhaps nothing could travel faster than the speed of light. The RDS Library holds 2,116 of his letters, and these are being digitised, and will be available online in a project due to finish this autumn. <http://tinyurl.com/3ph5uw>

Epiphyte diversity in plantation and native forests

Howard Fox & Daniel Kelly

Botany Department, School of Natural Sciences, Trinity College Dublin, Dublin 2, Ireland

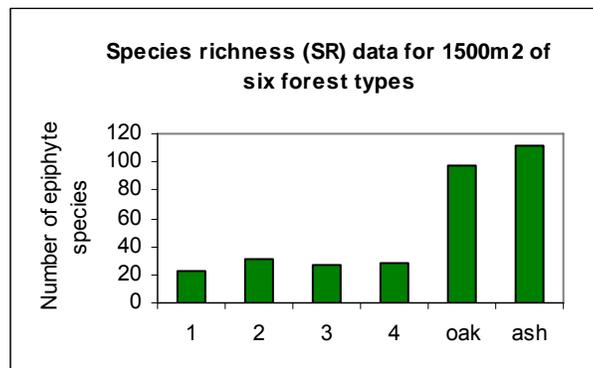
Mosses, liverworts and lichens are the principal groups of epiphytes in Irish forests. We sampled Sitka spruce reforestation plantations at four stages of the forest cycle – 1 pre-thicket, 2 thicket, 3 mid-rotation and 4 mature. We also looked at two types of old native woods namely Oak-dominated oak-birch-holly (WN1) woods and Ash-dominated oak-ash-hazel woods (WN2). Species richness (SR) figures were derived by combining species lists from 15 plots (3 quadrats each at 5 sites) covering a total area of 1,500 m² in each of the six forest types (see Figure 1).

Native woods differ from Sitka

spruce plantations in the presence of a shrub layer, more complex patterns of rainfall through-flow and stem-flow, natural tree canopy gap dynamics rather than clear-fell, and moderate

light levels.

Sitka spruce plantations have the benefit of producing merchantable timber. It is postulated that most epiphytes on Sitka spruce have come from heather moorland. *Hypnum jutlandicum*, *Kindbergia praelonga*, *Colura calyptrifolia*, *Metzgeria temperata*, *Byssoloma subdiscordans*, *Dimerella lutea*, *Dimerella pineti*, *Fellhanera bouteillei*, *Gyalideopsis anastomosans*, *Porina leptalea*, *Lophium mytilinum* and *Sarea resinæ* are ecologically informative species.



hfox@tcd.ie

SSAI Best Soils Oral Presentation Winner

Nitrous oxide emission from soils reduced using DCD nitrification inhibitor

S.J. Dennis^{*1,2}, K.G. Richards¹, K.C. Cameron², H.J. Di², J. Moir², D. Fay¹, V. Staples¹ & P. Sills¹

¹Johnstown Castle Research Centre, Teagasc, Co. Wexford

²Soil and Physical Sciences Group, Lincoln University, New Zealand



Under the Kyoto protocol, Ireland must reduce total greenhouse gas emissions to 13% above 1990 levels by 2010. Nitrous oxide emission from agricultural soils comprised 9.7% of Ireland's total GHG emissions in 2005.

Dicyandiamide (DCD) is a chemical that is commercially used in New Zealand to reduce direct N₂O emissions from soil by as much as 70%.

This study investigated the potential effectiveness of DCD on soils in Ireland. Urine was applied to lysimeters containing three soils (Clonakilty, Elton and Rathangan) representing three drainage classes (well, moderately well and poorly drained) in November



2006. Nitrous oxide emission was recorded using closed chambers for the following four months.

Nitrous oxide emission from the control and fertiliser only treatments ranged from 0.1 to 0.6 kg N₂O-N ha⁻¹. Emission from urine on the well and moderately well drained soils ranged from 1.8 to 3.6 kg N₂O-N ha⁻¹, and on the poorly drained soil ranged from 21.9 to 27.6 kg N₂O-N ha⁻¹. DCD had no effect on the emissions from the well drained soils, but reduced emissions from urine on the poorly drained soil by around 50% (to 12.1 - 13.6 kg N₂O-N ha⁻¹ (P<0.05)). DCD has the potential to reduce nitrous oxide emission from heavy soils in Ireland.

Development of a high-intensity pulsed ultra-violet light system for the novel destruction of *Cryptosporidium* oocyst in contaminated water samples

M. Garvey¹, M. Cormican² & N.J. Rowan¹

¹Department of Nursing and Health Science, Athlone Institute of Technology

²Department of Bacteriology, NUI Galway

This timely multidisciplinary study investigates the development and optimization of a high-intensity pulsed ultra-violet light (PUV) system for the novel destruction of *Cryptosporidium* oocysts in contaminated water. In addition to demonstrating efficacy in terms of parasite destruction, this pulsed-power approach to UV light illumination offers a radical new approach to energy delivery (3 J per pulse) and is strongly aligned with requirements for energy efficient innovations for the peak oil era. Initial "calibration" PUV-treatments of microbially-contaminated water samples reduced *Escherichia coli*, *Staphylococcus aureus*, *Listeria monocytogenes*, *Campylobacter jejuni*, *Pseudomonas*

aeruginosa and *Salmonella enterica* serovar *Enteritidis* populations to nondetectable levels ($\leq 8 \log$ CFU/ml) in less than 30 seconds exposure time at ambient temperature (10 pulses delivered per second with each pulse lasting 80 nanoseconds). Use of PUV proved to be orders of magnitude more efficient in terms of energy efficiency and microbial inactivation performance compared to using a traditional fixed wavelength (256nm) light source. This study also investigated critical electrical (applied voltage, frequency of pulse, pulse duration), biological (presence of organic matter), environmental (temperature) and other (distance from light source) inter-related factors govern-

ing the optimised destruction of *Cryptosporidium* oocyst destruction in water. *Cryptosporidium* inactivation performance was confirmed by challenge treated samples (with negative controls) to the HCT-8 cell line and by concurrent use of fluorescent microscopy. It is envisaged that the future use of the findings from this landmark study will impact upon public health by facilitating improvements in water treatment processes that will safeguard our potable water supplies.



COFORD Best Forestry Poster Winner 2008

Assessing the biodiversity of canopy arthropods in a range of forest types

R. Martin, A. Oxbrough, M. Wilson, S. Irwin, T.C. Kelly & J. O' Halloran

Dept. of Zoology, Ecology & Plant Science, University College Cork



This PhD project aims to investigate the biodiversity of canopy invertebrates in several different forest types, and is part of the larger FORESTBIO research project, with research partners Trinity College Dublin and Coillte. The primary aim of the FORESTBIO project is to assess the plant, bird and insect diversity in a range of Irish forest habitats, with a view to identifying measures which can be used to enhance plantation forest biodiversity. In particular the project focuses on forest types that are currently being encouraged through state policies and financial incentives such as mixed tree species plantations and native woodlands.

Over the last century, forest cover in Ireland has increased from <1% to ~10%, mainly through the planting of non-native trees such as Sitka Spruce, Lodgepole Pine and Norway Spruce, together with some broadleaf species, such as ash and oak. Sustainable forest management aims to enhance biodiversity in managed forests, and the goal of this research is to contribute to management decisions that will maximise naturalness and biodiversity in future Irish plantations.

Enhancing Ireland's plantation forests biodiversity may be of particular importance because there is very little native or

semi-natural forest in existence. Indeed, although around 10% of the Irish land area is forested or wooded, greater than 93% of this is accounted for by plantation forests, whereas native woodlands constitute <1% of Ireland's total landmass. The lack of natural woodlands in Ireland may mean that plantation forests have the potential to be an important resource for species associated with forested habitats in Ireland, e.g., birds, mammals and native insects. Invertebrates are an important component of the canopy fauna. They feed on trees, mosses, lichens, leaf litter and decaying material, as well as on other insects and themselves. Thus, they play a vital role in important ecosystem processes, such as decomposition and nutrient cycling. In turn, they constitute prey items for small mammals, birds and bats and hence are an important part of the food chain.

This PhD aims to assess the abundance and diversity of canopy-dwelling invertebrate species in a range of forest types in Ireland. Forest canopies make a large contribution to global biodiversity and make up the majority of photosynthetic material and biomass in forest ecosystems. Canopy biology is a relatively new science discipline and is still considered a

frontier area in scientific research. This is particularly true in Ireland, where there is very little knowledge about the species present in forest canopies.

The canopy is being sampled by thermal fogging, which disperses an aerosol insecticide (usually pyrethrins) from a machine on the ground into the tree canopy, rapidly paralysing or knocking down the canopy's arthropod fauna. Collection of the fallen arthropods is then carried out using an arrangement of plastic sheets on the ground. This method is relatively easy to use and eliminates the problem of physically accessing the canopy.

This project aims to:

- Provide an inventory of the canopy arthropods present in different forest types, including native woodlands and non-native plantations, as well as a detailed account of the biodiversity and functional groups present.
- Increase the knowledge base of canopy arthropod ecology in Ireland.
- Identify indicators of canopy arthropod biodiversity and make recommendations to incorporate the canopy fauna into sustainable forest management plans.

Further details at <http://www.ucc.ie/en/planforbio/>
Queries to r.martin@ucc.ie Thanks to: COFORD and IRCSET Embark Initiative



Duncan Stewart

Another First for Dundalk Institute of Technology

Dundalk Institute of Technology (DkIT) scored another first on the 1st to 3rd February by hosting the 2008 Environ Colloquium at DkIT - the first time that DkIT had hosted Environ. The event was a great success with over 300 scientists participating in spite of the inclement weather. The event comprised 96 oral presentations and 65 poster presentations on aspects of environmental science of significance to the Ireland. Twenty-seven sessions ranged from emerging environmental biotechnologies to waste management. The keynote address was given by TV personality Duncan Stewart and plenary lecture by Ken Irvine from TCD 'Linking Research and Policy'. A number of papers and posters were presented by members from the National Centre for Freshwater Studies located in DkIT Department of Applied Sciences. One notable aspect to the conference was the number of students from abroad who are doing research in Ireland.



ENVIRON 2008 committee; Valerie McCarthy, Siobhán Jordan & Caroline Wynne



The National Centre for Freshwater Studies (NCFS) and Dept. of Applied Sciences hosted the event on behalf of the DkIT. In particular Dr. Suzanne Linnane, Dr. Siobhan Jordan and Dr. Valerie McCarthy led the organisation of this event. Their high level of professionalism, dedication and attention to detail resulted in an event that was of very high quality while at the same time very enjoyable for all involved. iPodcasts of the event were recorded by Mr. Liam O' Gogain and can be heard on the Institute web site: <http://www2.dkit.ie/about/dkit/podcasts/dkitalk> A number of pictures of the event can be viewed on the DkIT and summaries of all the talks are available at: www.environ2008.ie

Brian Dunleavy




"Human Impact on Nature in Ireland" ESAI 2008 Photography Competition

closing date is Friday Sept. 26th, 2008



The ESAI invites entries from interested individuals to participate in the third ESAI photography competition. The theme for the competition is "Man's Impact on Nature in Ireland" Entries are welcome from all amateur photographers and will be assessed on the basis of picture quality, composition and the appropriateness of the caption. See our website www.esaiweb.org for entry forms and conditions.

The best three images will be published in the Local Planet Magazine (www.localplanet.ie). First prize will be a €250 voucher for www.pixels.ie (sponsored by the Environmental Research Institute, UCC), a years membership of ESAI and professional framing of the winning entry by Framework, Knockvicar, Boyle, Co Roscommon. The two runners up will each receive a year's membership of ESAI. The winners will be notified in October 2008. Last year's ESAI Photographic entrants will be displayed in the ENFO library over the summer months.



€800,000 Smile



Centre for Freshwater Studies
Dundalk Institute of Technology (DkIT)
http://ww2.dkit.ie/r_and_d/nafs

Dr. Edel Healy, Head of School of Nursing, Midwifery, Health Studies & Applied Sciences, DkIT this week announced that: The Centre for Freshwater Studies has been successful in acquiring a Higher Educational Authority grant of € 800,000 for laboratory equipment and refurbishment.

Dr. Breda Brennan Head of Department of Applied Sciences says that: "This expansion shows that the National Centre for Freshwater Studies in the Department of Applied Sciences DkIT sends a clear message that DkIT is committed to be a National, European and World leader in the field of Fresh Water Studies".

Dr. Suzanne Linnane said that: "This will mean a massive increase in the size of the of the National Centre for Freshwater Studies. The centre was set up in 2005 with grant aid from the Department of the Environment. We started with three researchers and have grown to nine, which includes M.Sc., Ph.D., and Post-doctoral researchers. With this physical expansion it is envisaged that the Centre will increase to seventeen researchers by the end of 2008".

Dr Brennan added: "This new equipment will be a fantastic asset to students conducting research projects in both our ordinary level and honours level B.Sc. courses in Biopharmaceutical Science, Agricultural Science, Applied Bioscience, Food Science & Health, Food Innovation, Biopharmaceutical Science and our new B.Sc.'s in Veterinary Nursing and Environmental Biology which are planned to begin in September 2008".

The National Centre for Freshwater Studies is currently engaged in a wide range of multi-disciplinary research including, a major National research project on the Milltown Lake Catchment in Co Monaghan and the National On-site Wastewater Treatment Systems Study as part of the Water Framework Directive. With the increased European Legislation on fresh water quality and the difficulties being experienced in Galway and other parts of Ireland it is investigated that there will be a future in Freshwater Science for some time to come.



Dr. Breda Brennan, Head of Department of Applied Sciences, Dr. Suzanne Linnane Head of The National Centre for Freshwater Studies and Dr. Edel Healy, Head of School of Nursing, Midwifery, Health Studies & Applied Sciences, Dundalk Institute of Technology



Science Ambassadors Wanted
www.science.ie

Are you working in science? Enthusiastic about it? Willing to help other people learn about your area of science? Then you might be a great Science Ambassador. It would take very little of your time, but could make a huge difference to young people considering a science career.

Discover Science & Engineering is searching for new additions to its Science Ambassadors programme. This is an informal community of people, made up of the newly qualified and the well established, who work in science, love their work and want to help others learn about their areas of science.

What do Science Ambassadors do?

The most basic level of involvement is to share your experience and career knowledge. This could be by being profiled on the [science.ie career pages](http://www.science.ie) or in other Discover Science & Engineering sites or publications.

There may also be opportunities for some Science Ambassadors to participate in a series of video profiles, talking directly about their experiences.

In addition, if you have time, you might be given the opportunity to join in other Discover Science & Engineering projects, such as:

- Participating in events like those during Science Week
- Attending or joining in other DSE events
- Contributing to DSE publications

If you would like to be considered for the programme then the first step is to send a brief email to [Orla Rooney](mailto:Orla.Rooney@forfas.ie) [Orla.Rooney@forfas.ie] with "Science Ambassador" in the subject line and a brief note stating:

1. Your current job and title
2. What courses you have taken/qualifications you have
3. Why you would like to be a Science Ambassador



INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE



Monitoring gaps in IPCC report

The report Future Climate Change Research and Observations is now available at the IGBP web-page: http://www.igbp.kva.se/documents/resources/Report_58.pdf. The report comes out of the workshop held in Sydney, Australia, in October 2007, which investigated the gaps and uncertainties identified in the IPCC Fourth Assessment Report. The findings will guide three ICSU sponsored international programmes GCOS, WCRP, and IGBP in developing future strategies for climate change observations and research.

Notices

Science & technology in 19th century Ireland:

A conference on this theme takes place in Dublin in July 2009, organised by the Society for the study of 19th century Ireland, the RIA committee for the history of Irish science and the Open University. The organisers are calling for 20-minute papers, and the wide range of suggested themes include Darwinism in Ireland, built and natural heritage, scientific publishing, and the linen industry. Deadline for submissions: 30th September 2008. Contact: juliana.adelman@gmail.com and g.hooper@open.ac.uk
Conference Date: 2-3 July 2009
Venue: Royal Irish Academy

Island ecology, Summer School Cape Clear Island, Co Cork

Topics will include: ecosystem sustainability, bird identification, the Irish names of plants and animals, and the ecology of Irish farmland in this 5-day summer school on Island ecology, on Cape Clear Island, Co Cork. The course also includes afternoon expeditions and excursions, all given by experts in their field.

Organised by UCC zoologist Dr Paddy Sleeman, and freelance biologist and Cape Clear resident, Dr Geoff Oliver, on behalf of the island cooperative. July 7-11 2008. Open to all. Cost: €200. For full details, see: <http://tinyurl.com/66z6eu> or phone Mary on 086 063 7060.

The Living Farmland, a Guide to Farming with Nature in Clare

"A newly published book - The Living Farmland, a Guide to Farming with Nature in Clare is now available and I highly recommend it. Despite its regional title, this publication is of national use and is a must-read for every landowner in the country. Absolutely first class. The cost is only 5 Euro which is remarkable as it's A4 in size, very colourful and has 230 pages."
Shirley Gallagher

Available from: Rural Resource Development Ltd., Shannon Business Centre, Town Centre, Shannon, Co. Clare. www.rrd.ie or from Clare County Council, Áras Contae an Chláir, New Road, Ennis, Co. Clare or order from book shops.



FarmFest '08 - A Changing Countryside

Teagasc, Athenry, Co. Galway

Friday, 20th June 2008, 9.30am - 6.30pm

Teagasc FarmFest '08 will particularly focus on emerging areas such as:

- Food
- Sustainability
- Environment and REPS



WOODLAND SCHEME Training Course

30th June - 2nd July 2008

Lady Gregory Hotel, Gort, Co. Galway

The course includes indoor and outdoor sessions covering native woodland ecology and management, and the procedures and standards of the newly revised NATIVE WOODLAND SCHEME. Approximately 600 individuals have completed the course to date, including landowners, foresters and ecologists, 3rd level students and researchers, and representatives from a wide range of relevant organisations (e.g. NGOs, NPWS, Regional Fisheries Boards, Coillte). Individuals wishing to become a Participating Forester or a Participating Ecologist under the scheme are required to complete the course.

For more information e-mail
kevin.collins@agriculture.gov.ie

Pollution Monitoring Using Stream and River Invertebrates

Professional Development Course led by Conor Clenaghan. Conor is a freshwater ecologist working for the Environmental Protection Agency. He has both professional and research experience in stream macro-invertebrate ecology.

Location: Derrygonnelly Field Studies Centre, Enniskillen Co. Fermanagh

Dates: Friday 5 September-Sunday 7 September 2008

Cost: £145 (Non-Residential: £ 100)



Wildlife of Fermanagh Lakelands

An exciting holiday course for families to explore and discover the amazing variety of wildlife in this spectacular area. Pond dipping, looking for signs of the elusive pine marten and other mammals, butterfly spotting and exploring Lough Navar Forest are just some of the fun activities for families to share. This course is led by experienced Centre Staff who will enthuse and captivate all ages.

Location: Derrygonnelly Field Studies Centre, Enniskillen Co. Fermanagh

Dates: Wednesday 16 - 18 July 2008

Cost: Adult £ 96, Children £ 76

Age Group: 5-10

