

Bush Telegraph

The House Magazine of the Edinburgh Consortium for Rural Research

GETTING BACK TO MY ROOTS



Professor Stuart Monro

It is a great pleasure to take on the role of Scientific Director of the Edinburgh Consortium for Rural Research and I will try to be a worthy successor to Chris Browitt who is now freed up to travel the world and break new ground in using seismology for a wide range of environmental issues. For myself, I've just stepped down from being co-chair of the Scottish Science Advisory Council (SSAC). This has been a really interesting experience, getting a feel for the wide range of science done in Scotland and seeing how science is used to help determine government policy. I think there are some aspects of the way SSAC operates that I might suggest to the Board of ECRR so that our activities in workshops and seminars have greater impact.

Coming to ECRR is a bit like getting back to my roots. I spent my childhood summers on farms around Aberchirder in NE Scotland and originally went to Aberdeen University to study soil science. I was eventually seduced by the delights of geology and the petrographic microscope but I did spend a couple of my student summers digging holes for the

surveyors of the Soil Survey around Granttown-on-Spey – there is nothing like digging a hole to help understand the complexities of Scottish soils! Most of my career has been with the British Geological Survey, mapping in north Ayrshire but also working on the use of geological data for planning and engineering purposes, environmental geology. Since then I've become much more involved in science communication and I was heavily involved in setting up Our Dynamic Earth, where I'm still part-time Scientific Director.

Our leaflet, which advertises ECRR, has a map showing the distribution of sites that are associated with ECRR. The organisation was initially set up to facilitate communication and foster collaboration between the various organisations working from the Bush estate. ECRR has now spread, touching virtually every part of Scotland through its members. It now may be time to consider whether our name Edinburgh Consortium for Rural Research is the most appropriate and reflect on whether or not it is time to change the name and reflect the Scotland-wide reach. A Scotland-based approach would mean that we will need to look critically at how a programme is arranged to ensure that we can achieve maximum engagement across all members.

Impact seems to have become a buzz word just now but looking back at the range of topics covered in our workshops and seminars, many should be useful to government in determining policy. I would like to explore ways in which we can be more visible to government and our outputs valued. In SSAC we have established a rapport with Ministers and are seeing the science outputs helping develop government policy. Perhaps ECRR can operate in a similar way feeding outputs to Ministers directly or through SSAC. It is important to our members that we retain the light touch approach as an informal, facilitating organisation but it is also important that we make as much use of

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our events as possible, as a mechanism for communicating between organisations as well as trumpeting research initiatives.

One of the highlights of our programme is the annual, Peter Wilson Lecture, held jointly with the Institute of Biology and the Royal Society of Edinburgh. This year's event was held on the 16th February 2010 and the lecturer was Professor Jim MacDonald, Principal and Vice-Chancellor of Strathclyde University. The issue of climate change has been at the forefront of the news recently with the Copenhagen conference and its impact will be felt in both rural and urban environments. Jim looked at some of the solutions that can be achieved in Scotland through the use of low-carbon technologies and energy infrastructure. He addressed many of the issues of the day in his lecture and the opportunities that they presented for Scotland.

The year ahead will be challenging but it will be exciting to see ECRR play its part in Scotland's rich science base.

UHI Millennium Institute



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NEW TEAM AT CRRS

A new team of specialists at the prospective University of the Highlands and Islands (UHI) is engaged in research, training and education on issues related to rural policy making, planning and development. The UHI Centre for Remote and Rural Studies (previously called UHI PolicyWeb) was established to improve the evidence base and level of debate around public policy issues affecting remote and rural areas, by encouraging collaboration between academics, researchers and practitioners in the Highlands and Islands of Scotland and beyond. The centre is based in Inverness and is part of the UHI academic partnership, working together to build the future university for the region.

The new interdisciplinary social science team has been put together with substantial support from Highlands and Islands Enterprise (HIE). Dr Philomena de Lima, who is the Director of the centre, has lived in the Highlands for around 24 years. She has been actively involved in researching rural policy issues, particularly with regard to migration, social exclusion, minorities and equalities and has published widely on these topics. The centre's mission is to address the social, economic, cultural and environmental opportunities and challenges facing remote and rural places and people.

RESEARCH & KNOWLEDGE EXCHANGE

The centre will initially focus on three cross-cutting themes, pooling the cross-disciplinary research expertise of its team members having academic backgrounds in sociology and social policy, human geography, public policy management, psychology and politics:

- **Access and inclusion** – with an emphasis on identifying inequalities in remote and rural places and working with policymakers and other stakeholders to address such inequalities in a wide range context. For example, social cohesion in the context of changing rural communities, social justice and climate change, issues of rural equivalence, and post school education.
- **Sustainability** – with a focus on asset ownership and management, leadership and governance issues, regional development and innovation, public service delivery in remote and rural places, and changing demography and its implications for the sustainability of rural communities
- **Managing change** – particularly in relation to economic and social change, local-global linkages, community adaptation strategies for climate, migration and technological advances within the context of remote and rural places.

As part of the centre's knowledge exchange activities, CRRS organises an annual seminar series. These seminars are open to all those with an interest in rural issues. Topics have included "Climate change and sustainability", "The future of crofting" and "Rural proofing". The theme of the 2009-2010 seminar series will be "Reimagining our Futures in Rural Communities". In addition, think tanks on issues such as rural innovation, creating thriving rural communities, affordable rural housing and migration have also been facilitated. We are also collaborative partners with the Centre for Research on Families and Relationships (based at University of Edinburgh).

In March 2010, CRRS in co-operation with the Centre for Rural Health and the Centre for Rural Childhood are planning to hold an event on "The Future of Public Service Delivery in Ageing Rural Communities" during the ESRC Festival of Social Science 2010 week. This festival is a key element of the ESRC's Science in Society strategy

and the ESRC's commitment to promote awareness of UK social science research to new non-academic audiences.

In October 2009, the centre launched its new Policy Briefing Paper Series. This series aims to cover one or more of the following depending on the particular topic and author:

- provide accessible summaries of research on a particular topic
- evaluate and/or recommend particular policy options in relation to a topic
- summarise a particular research project and extract policy messages

The papers are targeted at those with an interest and involvement in rural and remote policy issues at the academic, policy and community level, and shall be distributed widely amongst public, business, academic and community organisations. Forthcoming papers will address topics such as crofting, demographic changes, the third sector and land reform. Join our distribution list at crrs@uhi.ac.uk (Ref. CRRS Briefing Paper Series) and you will receive regular updates and electronic versions of the papers. Printed versions are available on request.

TRAINING & EDUCATION

CRRS provides training and education to an international standard on rural policy making, planning and development issues. Currently, the centre has two part-time PhD students, one working on community responses to climate change and the other on community power and asset (land) reform.

For further information on CRRS contact crrs@uhi.ac.uk, call 01463 273563 or visit our website www.crrs.uhi.ac.uk.

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TALK BY NOBEL PRIZE-WINNER

On 25th February 2010 Nobel Prize-winning alumnus immunologist Peter Doherty visited the Royal (Dick) School of Veterinary Studies to address staff and students. Edinburgh was the fourth vet school he had visited in as many days, but it was particularly special as he did his PhD in Edinburgh in 1970, before embarking on his Nobel Prize-winning research on how T cells recognize their target antigens in combination with major histocompatibility complex (MHC) proteins.

The speaking tour was funded by The Wellcome Trust's Veterinary Research Scheme, which aims to inspire vets to explore careers in science. Jacqui Matthews, Moredun Professor of Veterinary Immunobiology, and the Dean and Head of School, Professor Elaine Watson, took time before the lecture to tell Professor Doherty about Edinburgh's Research Track initiative, which is similar to the Wellcome Trust scheme. Research Track began in 2008 has been highly successful in getting young vets interested in scientific research. There are now 50 summer scholarships and also an increasing number of students doing intercalated degrees.

Professor Jacqui Matthews was delighted to welcome Professor Doherty to the School citing him as an ideal choice as a role model for students. "Peter graduated as a vet in Australia. He was then a research scientist at Moredun and did a PhD at the University of Edinburgh after which he launched himself into basic immunology back in his native Australia," she said. "His research has had a huge impact."

Speaking on his return to Australia, Professor Doherty regarded the tour as a great success.



Professor Peter Doherty is presented with mementoes of his visit by Professor Elaine Watson, Head of the Royal (Dick) School of Veterinary Studies. Also pictured is Professor Jacqui Matthews, Moredun Professor of Veterinary Immunobiology.

He said: "We went to all seven UK vet schools and ended with a dinner at the House of Lords, then a Wellcome Foundation Symposium," he explained. "The trip was a bit exhausting and I felt something like a parrot giving the same lecture over and over, but I enjoyed meeting with bright, young students afterwards and there was always an interesting dinner, often with students as well as faculty members."

He made it very clear how important it is that young vets consider science careers.

"People who train in veterinary science/medicine can end up doing a lot of different things, from stock-broking, through politics, to acupuncture, to university administration to being top research scientists," he said. "We tend to make decisions concerning career paths very early: sometimes our ideas change, and it's useful to have other possibilities in mind."

"Also, even if we remain in practice, vets are among the few people in the community who have a solid science training and are

used to dealing with evidence-based reality. It's important to put those views forward when, for example, discussing issues like vaccination or serving on local community bodies."

Some 60 people attended the talk, which was held at the Easter Bush Veterinary Centre. The guest list included students, staff and also some old friends and colleagues who remembered Professor Doherty's days at the Dick Vet. He was presented with gifts by Professor Watson, who in turn received a copy of his book: 'The Beginner's Guide to Winning the Nobel Prize'.

University Marine Biological Station Millport



UMBSM

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NEW RESEARCH VESSEL

The University Marine Biological Station Millport is an institution of the University of London, with a special relationship with the University of Glasgow which is involved in its management. Located on the eastern shore of the Isle of Cumbrae in the Firth of Clyde, it is ideally situated for marine biological teaching and research, being within easy reach of a diversity of marine littoral and sublittoral habitats with a rich biota, and readily accessible from mainland transport hubs.

To support this teaching and research, the Marine Station operates two research vessels. The larger vessel, RV Aora, is a modern, 22m, custom-built (by Macduff Shipyards, designed by Macduff Ship Design) vessel, in service since 2003, replacing an

older vessel of the same name. The new vessel, RV Actinia, replaces the Marine Station's smaller inshore vessel RV Aplysia, with a multifunctional vessel, completing the thorough modernization of the Marine Station's research vessel capabilities. The funding package for RV Actinia was provided by the Higher Education Funding Council for England, the Scottish Higher Education Funding Council, the University of London and the University of Glasgow.

RV Actinia is based on a 10.85m displacement catamaran hull, wheelhouse and whaleback that were moulded by Gemini Workboats in Colchester, and transported to Seaway Marine's boatbuilding facility in Macduff where the fit out was carried out, in accordance with design instructions provided by Macduff Ship Design. The vessel is not only equipped and finished to a high standard, but uniquely tailored to the varied tasks RV Actinia will be required to perform during her career as a research and teaching vessel at UMBSM.

The inherent stability of the Gemini catamaran design, the high freeboard and

deep gunwales augmented by aluminium rails provide a very safe working platform for both crew and visiting students and researchers. The wheelhouse roof is extended aft to provide shelter in inclement weather. Winches are positioned aft to keep the deck clear of wires and ropes, increasing safety. The vessel is powered by two six-cylinder normally aspirated 120kW Doosan LI-136 engines, through twin Dong-I DMT70/90 3.12:1 reduction gearboxes. Both 240v AC and 24v DC electrical power is available to support a wide range of equipment. The vessel capability includes beam and otter trawling, dredging, creeling, grabbing and coring, water sampling, and dive support. Apart from the two 2.7 tonne trawl winches, the vessel is equipped with a split-ring hydrographic winch, capstan, gilson winch, crane with power block, and pot hauler.

RV Actinia was completed in December 2009, but did not enter service at Millport until March 2010. During the intervening period it was frozen into the Caledonian Canal! Finally on site, it is now actively involved in the Station's activities and living up to expectation.

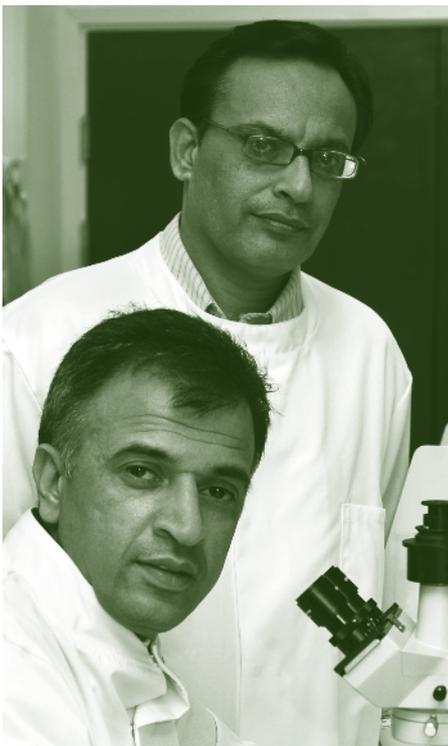


The Research Vessel Actinia

The Roslin Institute, University of Edinburgh



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Dr Arvind Mahajan and Dr Anil Kumar Arora

INDIAN VISITOR

It is widely recognised that India is becoming a key player on the international science stage and The Roslin Institute is keen to foster collaborations with its scientists. One such collaboration is between The Roslin Institute's Dr Arvind Mahajan and Dr Anil Kumar Arora, Associate Professor in the Department of Veterinary Microbiology of Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana.

Anil, who is the principal investigator of the *All India Network program on Haemorrhagic Septicaemia* (sponsored by the Indian Council of Agricultural Research) has been awarded the prestigious Commonwealth Academic

Staff Fellowship by the Association of Commonwealth Universities.

The Commonwealth Academic Staff Fellowships began in 1959 and since then around 26,000 individuals have used the awards to pursue advanced academic study in other Commonwealth countries. Information provided by the Association of Commonwealth Universities (<http://www.acu.ac.uk/>) notes that the "vast majority of award holders have returned to make a significant contribution to their home countries, in many cases at the highest level, making the award scheme one of the largest and most prestigious in the world."

Anil has used his Commonwealth Academic Staff Fellowship to undertake research in Arvind's lab for six months. Their collaboration aims to delineate the innate defence mechanisms involved during *Escherichia coli* O157:H7 interaction with the bovine host. Anil hopes to continue with this work as a long term collaboration with Arvind and also apply the techniques in his ongoing work on *Haemorrhagic Septicaemia*.

Although Anil's visit is almost over he has had a great time at The Roslin Institute. He noted, "Working at The Roslin Institute has been a great experience. There is a lot of interesting research being performed and it is great to be a part of that." When Anil was asked how he found living in Scotland he said, "When I got off the train at Waverley station I found a brochure about Edinburgh that called the city an "Inspiring Capital". I would certainly agree with that and would recommend studying or working here to anyone."

SPEED DATING FOR SCIENTISTS

The Roslin Institute hosted an interactive afternoon for the livestock breeding companies Cobb Vantress and Genus and the animal health company Elanco. The event consisted of short presentations by the Institute's director, David Hume, detailing

The Roslin Institute's developments and opportunities for interaction, David Argyle providing an update on the Oncology and Imaging centre and Bruce Whitelaw, who described the new developments from the Division of Developmental Biology in stem cells and biotechnology. Following the presentations, the representatives from each company had six 'speed-dates' with different academics, where opportunities for collaboration were discussed. The discussions were very productive leading to new partnerships and contacts being formed. Dr Gary Evans, the Genus representative at the event, said "The format of the day was very productive and very useful. Although we consider ourselves to be well connected in Edinburgh, we were able to establish a new contact and to re-establish an "old" one, and we look forward to continuing discussion on finding ways of working together".

Sonja Vujovic, Business Development Manager at The Roslin Institute said afterwards, "Events like this one are a key component towards developing more productive partnerships with companies and gaining a better understanding of their needs, and therefore towards achieving our aim of delivering research with applications in the world outside of academia."



Dr Sonja Vujovic

Moredun Research Institute



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THE ART OF SCIENCE

There has been an overwhelming positive reaction to a free public arts exhibition inspired by scientific research being conducted throughout Scotland. The ENLIGHTENMENT exhibition has been developed by Moredun Research Institute and features a creative mix of arts and science images by Scottish photographer David McIntyre.

People who have visited the exhibition whilst on display at the Dovecot studios in Edinburgh have been genuinely taken by surprise at the diversity, creativity and sheer beauty of the images within the exhibition. These images were inspired by the world class scientific research being conducted within the Scottish Research Institutes forming the knowledgescotland partnership, funded by the Scottish Government. This was an authentic partnership between the Arts and Science evocative of the ENLIGHTENMENT period in history.



David McIntyre (photographer), Professor Maggie Gill (RERAD) and Dr Lee Innes (Moredun) at the exhibition launch

Mr. McIntyre spent time with researchers throughout Scotland discussing their research before using the medium of photography to create graphic and abstract images inspired by the science. There are 30



The enlightenment exhibition has attracted huge praise for its original interpretation and promotion of Scottish science"

images being displayed in the exhibition with accompanying text and it is hoped that the images will draw people to the caption to find out more about the science that inspired the image.

David McIntyre was delighted to be involved with this project. He commented: "I wanted to produce images that would act as signifiers to the stories behind the research. Some images are quite abstract in nature and show multilayered themes, while others involve a single bold concept. All are related to the scientific story that inspired them and I hope they may invite curiosity, provoke interest and lend themselves to imaginative interpretation."

Dr Elisabeth Innes, Director of Communication at Moredun Research Institute co-ordinated this project. She said: "Science can help us find solutions to many of the major issues we currently face including climate change, developing sustainable energy sources and combating infectious disease. It is really important that as many people as possible engage in how we can use science to improve the quality of our lives and others around the world. We

hope that this exhibition will spark curiosity and debate about scientific discovery and its relevance to our everyday lives."

Environment Minister Roseanna Cunningham said: "Science contributes a huge amount to our environment, health and society but not everyone is aware of its impact on our everyday lives. This project is a creative way of bringing science to the public and I hope the exhibition will be thought-provoking and raise awareness of the high calibre research being carried out by Scottish scientists and supported by Government."

ENLIGHTENMENT is embarking on a tour of various venues throughout Scotland. For further information visit the enlightenment website – www.moredun.org.uk/enlightenment

Royal Botanic Garden Edinburgh



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TOP SCIENTISTS AT RBGE

Professor Stephen Blackmore, Regius Keeper at the Royal Botanic Garden Edinburgh, took the opportunity to showcase one of the Garden's latest scientific discoveries, when the Scottish Government's team of scientific advisers held a meeting at the John Hope Gateway.

Professor Blackmore explained that a one metre tall plant of the ginger family, discovered by RBGE staff in Indonesia in 2002, has now been recognised to be unknown to science. The new species which is affectionately named "Rhubarb and Custard" because of its pink and yellow flowers, will have its scientific name published shortly.

Professor Blackmore said: "New discoveries such as this ginger highlight the ongoing need to complete something as basic as a list of life on Earth. Without such information we cannot take the tough decisions on development, climate change and biodiversity loss facing us in the 21st century."

The Scottish Science Advisory Council's co-chairpersons, Professor Anne Glover and Professor Ian Ritchie were among a group of 13 council members who attended the meeting on March 11.

The SSAC is a group of 19 experts from the science and business community who provide the Scottish Government with independent advice on a range of science-related topics. This includes how best to capitalise on Scotland's world-leading research base to benefit Scotland's economy and its people.

Twelve leading scientists, including Professor Lord Robert Winston, the high-profile expert on science and society matters, are new members on the panel



Professor Stephen Blackmore talking about the ginger plant to Professor Ian Ritchie (SSAC Vice-Chair) and Professor Anne Glover (SSAC Chair and Chief Scientific Adviser to the Scottish Government).

LINKS WITH THAILAND

Scots scientists at the forefront of plant research and conservation in Thailand were given a welcome boost recently when formal links were forged between the Royal Botanic Garden Edinburgh (RBGE) and the Asian Kingdom's largest botanic garden.

RBGE's Director of Horticulture, Dr David Rae and Dr Kongkanda Chayamarit, the new Director of Queen Sirikit Botanic Garden (QSBG) in Chiang Mai, jointly signed a Memorandum of Collaboration which means the two organisations will now work more closely together.

Dr Rae said: "RBGE is already doing work in this very important part of the world so it is very sensible for us to have close links with QSBG. The collaboration will be of great benefit to both organisations, particularly in science and horticulture."

Dr Chayamarit commented: "This is an important step forward in strengthening the partnership between our two organisations. By formalising our working relationship we can look forward to fruitful long-term projects."

The formalities at RBGE were welcomed by botanists Dr David Middleton, Dr Stuart Lindsay and Dr Mark Newman who are already involved with ongoing initiatives in Thailand, including a Leverhulme Trust funded project to develop a user-friendly web-accessible identification tool for the 670 species of ferns that have been found there. This is more than ten times the number of species found in Scotland. A comprehensive information system on Thai ferns, with photographs of hundreds of species, will eventually be made available on the RBGE website.

Also a focus of the botanists' fieldwork and research is a family of plants that can be found on many a British windowsill, Gesneriaceae, more commonly known as the African Violet family. Many new species have been found in Thailand, particularly on limestone mountains, lots of which are inaccessible and may harbour many more undiscovered species.

Dr Middleton, who has several on-going projects in Thailand, commented: "RBGE has had a long involvement in botanical research in Thailand. The Flora of Thailand Project (a project to completely document the tremendous plant diversity in Thailand) was initiated in 1965 by botanists including the late Bill Burt of RBGE. It has been gaining momentum in the past few years and this Memorandum of Collaboration will no doubt be a great catalyst for keeping the it and other Thai projects moving forward."

Forest Research Service



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TREES & FORESTS IN BRITISH SOCIETY

Forest Research organised a major conference 'Trees and Forests in British Society' at Heriot Watt University on the 13th–15th April. The conference explored the demands that society places on forestry and the role that trees, woods and forests are expected to play. The specific objectives were to

- Discuss societal and economic trends shaping the management of British trees and forests in both urban and rural contexts
- Share experiences of responses to these trends and how society can successfully engage with its woodland resource
- Identify future research and policy directions needed to meet emerging challenges.

Further information about the conference can be viewed at <http://www.forestry.gov.uk/fr/INFD-7RXCB4>



Great fun for all in the Real Life Science Lab at the John Hope Gateway Building, Royal Botanic Garden, Edinburgh

PUBLIC OUTREACH INITIATIVE

Forest Research teamed up with colleagues from Forestry Commission Scotland to run a public drop-in event in the John Hope Gateway Building, Royal Botanic Garden, Edinburgh. The event was held over the weekend 13/14th March in the Real Life Science Lab and 600 people passed through in the six hour period. Some stayed for up to an hour. There were a range of activities for all ages from 5 years old which included making small wooden animals to studying contents of owl pellets and pond life through microscopes. Other activities and posters introduced topics such as habitat networks and DNA fingerprinting.

Steve Penny, Research Liaison Officer (Scotland) said, "This is a new venture for Forest Research but to reach such a large number of people in such a short time and see how the young people (and not so young) really enjoyed the activities and learning was very rewarding to all the staff who took part. The new Gateway building and the lab is a fantastic resource and the RBGE staff are particularly helpful and welcoming".

FORTIETH ANNIVERSARY

May 8 2010 marks the Fortieth Anniversary of the official opening of Forest Research's Northern Research Station (NRS). To mark this important milestone, we are holding a series of events on Friday May 7. At lunchtime members of the current staff will be joined by retired scientists and technicians to remember our shared history of research and development. One broadleaved and one conifer tree, each a product of the tree breeding programmes carried out at NRS, will be planted to act as a lasting memorial of this anniversary. The lunch will be followed by an afternoon seminar on the theme of 'Forest Science in the 2010s' where five eminent speakers will give their personal perspectives on this topic. The speakers will be Tim Rollinson (Forestry Commission Director General), Sir David Read (Emeritus Professor of Plant Science, University of Sheffield), Professor Catherine Ward-Thompson (Edinburgh College of Art), Professor David Miller (Macaulay Institute), and Professor Peter Freer-Smith (Forestry Commission Chief Scientist). Finally, we shall round off the day with a birthday ceilidh in Edinburgh.

Scottish Crop Research Institute



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Ray Perman, Chairman of new Institute to be formed from the merger of SCRI and MLURI

HUNT FOR NEW CEO

The hunt has begun for a world-leading scientist to fill the role of Chief Executive Officer at the new scientific research institute to be formed from SCRI (Scottish Crop Research Institute) and the Macaulay Land Use Research Institute. The Moredun Research Institute (MRI) on the outskirts of Edinburgh - internationally recognised for its work on livestock - is expected to be an affiliate.

"The merger is being driven by a strong science case, so we are looking for an exceptional scientist to lead the new institute, helping it to achieve its full potential in contributing to solutions to some of the major resource problems the earth faces." - Ray Perman, New Institute Chairman

The Scottish Government has described the new institute as a powerhouse for research into food, land use and climate change.

ADVISING GOVERNMENT

SCRI's Director and Chief Executive, Professor Peter Gregory, is among 12 leading scientists who have been appointed to the specialist panel that advises the Scottish Government on science issues.

The Scottish Science Advisory Council (SSAC) is a group of 19 experts from the science and business community who provide the Scottish Government with independent advice on a range of science-related topics.

Other scientific leaders joining the Advisory Council are Professor Lord Winston, an expert on science and society matters, and Professor James Hough, an international leader in the search for gravitational wave.

TRAINING FUTURE CROP SCIENTISTS

SCRI and the University of Dundee have been awarded almost £350,000 to train the next generation of crop breeders, who will help to address worldwide food shortages and deal with the impact of climate change.

The Biotechnology and Biological Sciences Research Council (BBSRC) have provided the funding to support students on the new MRes 'Crops for the Future' postgraduate masters course. The grant will nominally support 18 one-year studentships between 2010 and 2013.

Dr Andrew Flavell, Reader in Plant Sciences at the University, and based at SCRI, explained this meant there was a need for a new generation of plant breeders to emerge.

"The growing World food crisis will encourage young scientists to enter areas where shortages of suitably qualified scientists could otherwise create problems," he said. "We expect, and will encourage, graduates from the programme to become professional crop scientists who will make a significant contribution to the development of modern agriculture in the 21st Century.

CHAIR OF NEW INSTITUTE

The Chairmen of the Governing Boards of the Macaulay Land Use and the Scottish Crop Research Institutes have announced the appointment of Ray Perman as the Chair of the new scientific research institute.

The new institute will be created by bringing the Aberdeen and Invergowrie based institutes together in April 2011.

Ray Perman is a former chair of WWF Scotland and a trustee of WWF UK. He was a board member of Scottish Enterprise until December 2009 and chair of Social Investment Scotland.

Peter Berry CMG, the Chairman of the SCRI Governing Board, said: "I look forward greatly to working with Ray over the next year to establish the world class new institute which is our vision for this merger of two great Scottish scientific institutions."

Michael Gibson CBE, ARAGS Chairman of the Macaulay Governing Board, said: "I am very proud that the Macaulay is going to be a founding partner in what will be one of Europe's foremost scientific institutes that is based here in Scotland".

"The new organisation will have a tremendous amount to contribute to Scotland and the world" - Ray Perman, New Institute Chairman

The newly appointed chair Ray Perman said: "These two institutes already have international reputations for the quality of the work they do. By coming together they are recognising that the problems the world faces, such as climate change and the sustainable use of scarce resources, demand cross-disciplinary solutions. In the 'male programming window', fetal Sertoli cell number and adult testis size in the rat. *Endocrinology* 149: 5280-5287

In Brief. . .

BATTLING THE TETSE FLY

Researchers at the **University of St Andrews' University Biomedical Sciences Research Complex** are one step closer to breaking the tsetse fly's grip on Africa's health and economy.

The bloodsucking fly, which carries the parasite *Trypanosoma brucei*, is responsible for the spread of the deadly African sleeping sickness and the related disease Nagana in cattle.

Each year African sleeping sickness infects up to 60,000 people, kills three million livestock and causes more than £2 billion in economic losses.

But now researchers at St Andrews have developed a strategy to block the parasite's use of a protein crucial to its defence against the human immune system.

By investigating a specific gene involved in the production of lipids, the researchers have been able to stop the parasite from using this major and essential protein, resulting in the parasite's death. This novel approach of interfering with this essential process has the real potential to provide cheap, safe drugs, to help overcome poverty and disease in Africa.

ENTREPRENEURIAL PhD STUDENTS

A team of Edinburgh PhD students beat off competition from six teams from across Scotland to reach the national finals of Biotechnology YES (Young Entrepreneurs Scheme), held in London in December 2009. This prestigious competition was devised to raise awareness of the commercialisation of bioscience ideas among postgraduate students and postdoctoral scientists.

The University of Edinburgh team comprised PhD students from the **MRC Human Reproductive Sciences Unit** & other Research Centres within Edinburgh University. The team's hypothetical company, The Enzyme Attic, specialised in the use of hyperthermophilic enzymes isolated from extremeophiles. Their imaginary product was Limezyme, an enzyme mixture used to catalyse conversion of limestone into clinker - the main constituent of cement. Despite a strong performance in their group they were eventually beaten by a team from the University of Cambridge and Imperial College London, who went on to win the competition.

RESPONDING TO VOLCANIC ASH FALLOUT

As volcanic ash fallout is predicted to reach ground level following the eruption of the Eyjafjallajökull volcano in Iceland, scientists from the **Centre for Ecology & Hydrology** have responded rapidly to increase sampling rates of air quality, soils and vegetation at its long-term monitoring sites across the UK.

CEH operates a number of long-term monitoring programmes in the UK, including the Environmental Change Network (ECN), the UK EMEP supersite in Scotland which measures air pollutants, and the Acid Waters Monitoring Network (AWMN). The ECN collects, stores, analyses and interprets long-term data based on a set of key physical, chemical and biological factors which drive and respond to environmental change at more than 50 terrestrial and freshwater sites across the UK.

Since the volcanic eruption episode began, CEH scientists have increased existing sampling rates, particularly where extra data may give further information on changes in levels of acidity, sulphur, mercury and fluorine. Levels of fluorine are being analysed in waters, soils and vegetation. CEH's Auchincorth site in Scotland has been measuring air mercury levels since the morning of 16 April when the volcanic ash began to drift over northern Europe. Results to date show no noticeable increase in mercury concentration, although this could change as the plume continues to reach ground level. Analysis is ongoing for other elements.

RECOGNITION AT HOLYROOD

In a recent Scottish Parliamentary debate, the future of Aquaculture was discussed and Scotland's achievement in dramatically increasing its export of high quality salmon was recognised. Dr Richard Simpson MSP for mid Scotland and Fife, praised the **University of Stirling's Institute of Aquaculture** for leading the way in this increasingly important field.

The Institute has made a significant contribution to many aspects of fish science. It has international links with Taiwan, Uganda and Trinidad and its recent work with Tilapia fish has contributed to the work on warm water fish worldwide. In Aquaculture, effective disease control remains an important factor and Dr Simpson raised the issue of upgrading the standards for combating bacterial kidney disease, the control of which is vital to the continued export of eggs and Smolts salmon.

Speaking after the debate, Dr Simpson said: "Investment and diversity in Aquaculture is necessary for the Scottish industry's long term future, as we continue to lead the way in Aquaculture."

"The work already carried out by the University, together with its ongoing research, is integral to Scotland's success in fish farming. Its record of achievement has also had a knock-on effect worldwide, which is why Stirling's Institute of Aquaculture has a lot to be proud of."

PLANTS' ROLE IN GLOBAL WARMING

Plants are an effective way of tackling global warming despite emitting small amounts of a greenhouse gas, a study has shown. The Edinburgh University research suggests plant leaves account for less than 1% of Earth's methane emissions.

Dr Andy McLeod, of **Edinburgh University's School of GeoSciences**, said: "Our results show that plant leaves do give rise to some methane, but only a very small amount".

The impact on global warming from methane is considered to be about 25 times greater than from carbon dioxide. The findings confirmed that trees are a useful way of offsetting greenhouse gas emissions, as their output of small amounts of methane is far outweighed by their capacity to store carbon from the atmosphere in their leaves, wood and bark.

The research, carried out in collaboration with the US National Centre for Atmospheric Research, was funded by the Natural Environment Research Council and Forest Research, and is published in the journal *New Phytologist*.

ECRR DIARY 2010

Jun 4	Executive Committee	University Marine Biological Station, Millport, Isle of Cumbrae	11.00
	Directors' lunch		12.30
Sep 6	Executive Committee	RSPB Scotland, Vane Farm, Fife	11.00
	Directors' lunch		12.30
Oct 20	Workshop: Ecotourism	Napier University Co-ordinator: Dr Kathy Velandar	14.00
Nov 10	AGM & Main Board meeting	Our Dynamic Earth, Holyrood Road, Edinburgh	15.30
	Reception		17.00
Dec 6	Executive Committee	BioSS, King's Buildings, Edinburgh	11.00
	Directors' lunch		12.30

CONFERENCES/WORKSHOPS

May 18-19 2010: 5th NERC Technology Forum, Our Dynamic Earth, Edinburgh
<http://www.bgs.ac.uk/techforum2010/home.html>

May 20 2010: NERC Workshop - Energy and Power for Remote Instrumentation, BGS Murchison House, Edinburgh
<http://www.bgs.ac.uk/energyPower2010/home.html>

June 4 2010: International Biometric Society British & Irish Region, Summer Meeting, Royal Botanic Gardens Edinburgh
<http://www.britismandirish.tibs.org/live/>

June 28 2010: Institute of Aquaculture Research Conference, University of Stirling
<http://www.aqua.stir.ac.uk/news/research-conference-2010/>

July 12-16 2010: International Meeting on Statistical Climatology, University of Edinburgh
<http://cccma.seos.uvic.ca/imsc/11imsc.shtml>

September 5-9 2010: 7th Solanaceae Conference, Dundee, organised by the Scottish Crop Research Institute and UK Sol
<http://www.sol2010.org/>

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Biomathematics and Statistics Scotland	www.bioss.sari.ac.uk
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MRC Human Reproductive Sciences Unit	www.hrsu.mrc.ac.uk
National Museums of Scotland	www.nms.ac.uk
Royal Botanic Garden Edinburgh	www.rbge.org.uk
Royal Society for the Protection of Birds – Scotland	www.rspb.org.uk
Science & Advice for Scottish Agriculture	www.sasa.gov.uk
Scottish Crop Research Institute	www.scri.sari.ac.uk
Scottish Natural Heritage	www.snh.org.uk
Scotland & N. Ireland Forum for Environmental Research	www.sniffer.org.uk
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FUTURE ISSUES

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Back issues can be viewed at <http://www.ecrr.org.uk>

COPY DEADLINE

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