



## Welcome...

it's a real pleasure to be able to provide the welcome preface to our second School of Biological Sciences newsletter.

It gives me yet another opportunity to do some shouting from the rooftops about our collective successes across teaching, research, impact and outreach. Since our last newsletter we've been awarded several major research grants; hosted important international conferences and symposia on ecology, marine spatial management and soil; had some of our star staff elected as Fellows of the Royal Society (of both London and Edinburgh); secured new Royal Society and NERC Independent Research Fellows; launched new Environmental Science Masters programmes; seen several postgrads and postdocs bag awards for best talks and outstanding contributions; graduated another class of exceptional students; and launched a whole new School research strategy. And that list goes on...

Such a litany of achievements reflects not only the hard work of individuals, but also the collegiate and supportive nature of our School. It is a truism that for SBS the whole really is greater than the sum of its parts. Thanks to everyone for that continued input.

During the summer we inevitably end up dispersed around the globe, doing fieldwork, presenting at conferences, and taking well-earned vacations. When we all come back together for the new academic year and welcome our returning Undergraduates and new cohorts of PhD and Masters students, please take some time to catch up with colleagues and let them know the exciting things that have been happening over the summer - we're already collating our next big list of SBS successes!

**Professor Stuart Piertney**  
Director of Research

Deer and landscape photos above: Jean-Paul Schmit

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### SBS Showcase Video

A new SBS video was uploaded recently to the University's YouTube channel. It showcases our School, highlighting the benefits for students who choose to study here. It shows the breadth of research carried out in the School and the superb facilities on offer.

Visit: [https://youtu.be/\\_CQz1q2RaY](https://youtu.be/_CQz1q2RaY)

# Assessing the responses of marine mammal populations to the construction of offshore wind farms

PROFESSOR PAUL THOMPSON



L/R Clockwise: Seal photo was taken by Jean-Paul Schmit. Tim Barton and MSc Student Saliza Bono setting up underwater noise recorders in preparation for fieldwork on the Beatrice Wind Farm site. Becky Hewitt collecting seal photo-identification data in Loch Fleet.

The School of Biological Sciences (SBS) has a long tradition of research projects relating to offshore energy developments. Early work included studies on the effects of the UK's developing oil and gas industry on marine benthic communities and seabird populations. Recent research within the sector has focused on the effects of seismic survey noise on marine mammals, and studies that have supported new developments in deep water habitats or which underpin future decommissioning plans.

Over the last 10 years, there has been an increasing amount of SBS activity working on marine renewable energy projects. For example, Dr Beth Scott's research group is currently carrying out work around pioneering wave and tidal energy development in the Pentland Firth.

In the Moray Firth, my group's work has focused on offshore windfarm developments. We have been contracted to design and implement the marine mammal monitoring programme that the industry is required to develop under their licence conditions. Over the next two years, Beatrice Offshore Wind Ltd (BOWL) will be investing £2.5 billion in the construction of an 84 turbine windfarm off the coast between Wick and Helmsdale. The work started in April, and staff and students at the Lighthouse Field Station have been having one of the busiest field seasons ever.

This research programme builds upon long-term studies of harbour seals, bottlenose dolphins and harbour porpoises that we've conducted in the Moray Firth over the last three decades.

This year, we've been working with colleagues at the University of St Andrews to track the movements of seals with GPS enabled mobile phone tags. This work focuses on harbour seals in Loch Fleet National Nature Reserve, where we identify individuals by photographing their unique pelage markings. These data are then used to estimate annual breeding success and year-to-year survival. A 10-year baseline dataset from this site now provides a unique opportunity to explore if any short-term effects of piling noise during windfarm construction might have longer term population level impacts.

In parallel, we've been undertaking another study on the responses of harbour porpoises to acoustic deterrent devices. This is being used to evaluate new procedures that we have helped the industry and regulators develop to minimise any risk of direct injury around the piling vessels. Further collaboration with CEFAS is using noise measurements and acoustic propagation models to explore behavioural responses of seals and porpoises to different noise levels, and the seals' overall exposure to noise from pile-driving.

These different data sets will be integrated to test and improve modeling frameworks that are being used across the world to assess the impacts of industrial noise on marine mammal populations. Together these studies will support current efforts to balance the need for low carbon energy sources with appropriate levels of environmental protection.

Follow us at:

 [www.abdn.ac.uk/lighthouse/blog](http://www.abdn.ac.uk/lighthouse/blog)

 @lighthousefieldstation

 @CromartyLH

# BAGECO 14: 14th Symposium on Bacterial Genetics & Ecology

PROFESSOR JIM PROSSER



In June of this year, Aberdeen hosted the 14th Symposium on Bacterial Genetics and Ecology (BAGECO 14). This biannual conference is now established as a major international conference on microbial ecology and genetics, and attracted approximately 250 microbiologists, ranging from postgraduates to established international researchers from 35 countries, including New Zealand, USA, China and India.

Its location in Aberdeen reflects the strong tradition and reputation of microbiology, through establishment of the Microbiology Department by Allan Hamilton in 1975, but also through strong research in microbial ecology research in other traditional University Departments, including Plant and Soil Science, Agriculture, Zoology and Medical Microbiology, as well as local Research Institutes, including soil microbiology (James Hutton Institute), marine microbiology (Marine Sciences Scotland) and rumen and gut microbiology (Rowett Research Institute). Local microbiology companies associated with the University were also represented by NCIMB Ltd.

The opening scientific session was followed by a Civic Reception at the Aberdeen Maritime Museum, hosted by the Lord Provost with an address by the University of Aberdeen Principal.

The scientific programme was designed to increase awareness of disciplines closely related to microbial ecology and genetics, to demonstrate their importance for microbial studies and to encourage interactions and collaboration. Keynote speakers were therefore chosen whose background and expertise lay in related disciplines but whose research focused on microorganisms.

The opening lecture by Ford Doolittle from University of Halifax, Nova Scotia, had a philosophical theme and considered the relationship between two major theories, evolution and Gaia. Other invited lectures were given by those with backgrounds in the physical and mathematical sciences, animal and plant ecology, evolutionary biology, biogeochemistry, ecosystems and engineering. All illustrated how this broad range of disciplines have led to significant advances in our knowledge and understanding of the genetics and ecology of microorganisms and their interactions with plants and animals.

The keynote lectures were excellent and provided the framework for a wide range of offered papers and 227 poster presentations by early career researchers. Financial support for the meeting came from FEMS (the Federation of European Microbiological Societies), the Society for Applied Microbiology, the International Society for Microbial Ecology, Terragenome and NCIMB Ltd.

The meeting was held at the Beach Ballroom, whose Art Deco architecture and opportunities for dolphin-watching off Aberdeen Beach, provided a unique setting for a scientific conference. The sprung dance floor also provided the ideal location for the conference dinner and ceilidh.



STUDENT PROFILE

## Niko Johansson

BSc BIOLOGICAL SCIENCES

I was lucky to be able to spend a month as a research intern in Royal Botanical Gardens, Kew, generously supported by the Roy Scott Lamb fund during my summer after 3rd year.

I worked in the field of molecular fungal systematics, and my project investigated how NGS metabarcoding data from soil samples can be used to identify and quantify the fungal community at a given site. Ultimately, this work can be used in conservation and IUCN classification of rare and often poorly-known fungal species.

My work focused on the fungal genus *Russula*, one of the biggest macrofungal genera. The mushrooms belonging to this group are big, colourful and easily detected in the field, which would lead one to think they could be easily identified to species level. In reality, mycologists have struggled with species ID in this group for decades, and it's considered "horrible" by many fungal taxonomists.

My work has in part shed light to the systematics of this tricky group, including identification of sequences with no known matches to any described *Russula* species. Some of these represent wholly new species to science, and if more evidence is found, will be described for science in the future.

# A taste of some of our diverse & exciting field courses

## FIELD ECOLOGY SKILLS

by Dr Clare Trinder

LOCATION: Aberdeen, Scotland

This field course runs during Freshers' Week. We go out to the field every day to gain hands-on experience of survey methods that are needed to work for ecological consultants or conservation organisations such as Scottish Natural Heritage. As well as categorising and mapping habitats, we also survey for protected species such as bats, badgers, red squirrels, water voles, otters, pine martens and freshwater invertebrates. We also brush up on bird identification and survey methods. You may not always see the animals you are surveying, but they often leave tracks and visible signs that can give you valuable information about whether they are present in an area and which habitats they are using.

### WHAT THE STUDENTS SAID...

*"This course encourages us to get out there and get involved in conservation projects."*



*"There is never any certainty over what we manage to see, or what the weather throws at us. But SBS Field Courses are always one of the highlights of the teaching year for students and staff alike."*

PROFESSOR PAUL THOMPSON



## MEDITERRANEAN TERRESTRIAL ECOSYSTEMS FIELD COURSE

by Dr Martin Barker

LOCATION: Catalonia, NE Spain

During this field course we visit three contrasting beautiful natural parks. For most, if not all, of the students on the course, these ecosystems will be unfamiliar. So, students develop observational skills and apply existing knowledge in order to interpret the Catalanian landscape. Lots of help is provided by the course team and from local experts.

### WHAT THE STUDENTS SAID...

*"Talks from local experts were fantastic. Staff were phenomenal, one of the best parts of the course."*

Students design scientific investigations, using only basic equipment. Typically, students conduct really exciting fieldwork using little instruction or equipment. Another element is that students are required to record their work in a field notebook which is a valuable, transferable skill. It also provides a great record of a fantastic scientific experience.

## COASTAL BIODIVERSITY FIELD COURSE

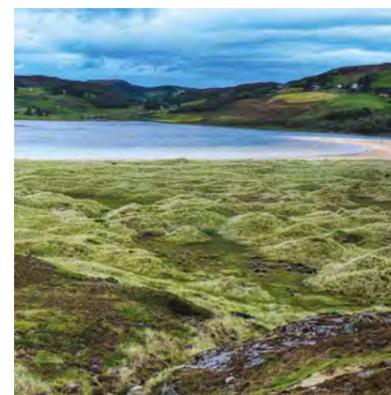
by Professor Paul Thompson

LOCATION: University's Lighthouse Field Station, Cromarty, Scotland

20 students, 4 members of academic staff, and 6 days teaching in some of Scotland's internationally important coastal and marine habitats. This field course explores how different research methods are used to survey different species within the complex marine and terrestrial ecosystems found in this area. One of our key aims is to encourage students to observe and explore wildlife habitats on our doorstep. Many of our activities also focus on the critical inter-relationships that exist between different components of these systems; from the understated microscopic benthic invertebrates to



charismatic megafauna such as the Moray Firth bottlenose dolphins. As well as covering ecological techniques, the field course also highlights the links between our science and the stakeholders involved in managing and protecting these important habitats.



## INTRODUCTION TO ECOLOGICAL FIELD RESEARCH IN NORTHERN SCOTLAND

by Dr Julien Martin

LOCATION: Bettyhill Field Station, Sutherland, Scotland

This is a one week field course and provides an excellent opportunity to observe wildlife, gain experience of a variety of ecological field methods and to build good relationships within the MSc class. The aims of the field trip are to gain experience and understanding of a range of Scottish ecosystems, to learn how to ask questions about ecological processes and to learn a variety of field sampling methods. The activities during the trip include: study of community ecology in plant coastal ecosystems and in freshwater invertebrates; estimation of small mammal abundance in woodlands using sand tracking and camera traps; behavioural observations of sea-birds and marine mammals; practical introduction to drones in ecology; student-led research projects.

The mini research projects allow students to develop research questions, define a sampling protocol and collect the data in a short amount of time. This not only gives a snapshot of research problems to the students but also helps them develop critical thinking, leadership and independence. Given that all activities favour team-building and the remoteness of Bettyhill Field Station, the course is excellent to develop a strong cohort dynamic.

## STUDENT PROFILE

# Alexandra Puertolas

## PHD PLANT & SOIL SCIENCES

On the 29th and 30th of March 2017 I participated in the "Molecular Biology of Plant Pathogens (MBPP)" Conference organised by the British Society of Plant Pathology (BSPP), in St Aidan's College, Durham. The aim of this conference was to encourage postgraduate and postdoctoral scientists around the UK to share their research, socialize and develop a scientific network. Moreover, the conference is a great opportunity to practice our presentation skills and reflect on the importance of sharing the results of our research. We got feedback from other researchers with different skills and different points of view under other disciplines of plant pathology.

The conference talks provided us with a great overview of the latest research carried out by leading research groups in the UK on molecular techniques applied to plant pathogens and plant technology on very different fields - from proteomics to gene expression and antifungal resistance. The oral presentations were a great chance to discuss the research, solve questions and learn new notions out of our own research.

I presented part of my PhD research in the poster session, called "A multi-locus Illumina assay demonstrates the oomycete movement through the international plant trade in ornamental plants". The poster session was held at a relaxed wine reception that allowed all PhD students, postdocs and researchers to interact and socialize.

I also attended the 12th EFPP - 10th SFP Conference "Deepen Knowledge in Plant Pathology for Innovative Agro-Ecology" in Dunkirk, France. I presented part of my PhD research in a poster, entitled "Detection, identification and quantitation of Oomycetes in imported nursery plants". It was a great opportunity for me to expand my knowledge on different fields of Plant Pathology and to build an international network of contacts.

During this intense week, presenters from all around Europe and other countries showed recent findings concerning plant diseases, biosecurity and how the research efforts can help to create a better understanding of the risks of pests and pathogens on our plant production and protection. Most of the work presented had a direct application on agronomy and demonstrated many ways to improve the management of horticultural diseases using different approaches.

However, it wasn't hard work all the time! The conference organised some guided visits to different places around Dunkirk. I enjoyed the visit to the fortified city of Bergues and an artisanal brewery, where the owners showed us how they made different types of beer and let us try them. Then, on the last night, we attended the gala dinner, where we had a lot of fun and could see a representation of the Dunkirk carnival, which is an ancient tradition that still carries on today.

On the last day of the conference, my poster was awarded one of the three poster awards for non-French speakers by the EFPP (European Foundation of Plant Pathology) and the SFP (French Society for Plant Pathology). I am very grateful for this recognition and overall, it was a wonderful experience to be there and help with my professional development. Without the scholarship award from the Development Trust Student Support Fund, I wouldn't have been able to attend and participate in these conferences so the award was very much appreciated.



# Aberdeen Biodiversity Centre Public Engagement Events

ABERDEEN BIODIVERSITY CENTRE TEAM



L/R: Luke Tilley (Royal Entomological Society), Dr John Baird, 'Jungle Jess' and Aberdeen Biodiversity Centre team. Jungle Jess greets a young fan.

Aberdeen Biodiversity Centre promotes and supports the teaching of environmental and science topics, local biodiversity and cutting edge research from the University of Aberdeen.

We provide a range of opportunities for teachers, schools and the local community to learn and engage with all aspects of biodiversity, and engaged with 7000 people in 2015-16. We work with partners across the North East of Scotland as well as academics within SBS to reach our aims, and regularly coordinate high profile public engagement events in collaboration with academics as a way of helping them communicate their research to the public.

A great example of this was when we hosted 'National Insect Week' for the Royal Entomological Society last year. Centre staff led minibeast themed workshops all week for 160 children from local primary schools, and the week culminated in a 'Carnival of the Minibeasts' at the weekend which attracted over 1000 visitors to the Zoology Building. Led by Dr John Baird, this event was a great opportunity for our academics to showcase their research to a public audience through a variety of activities for all the family.

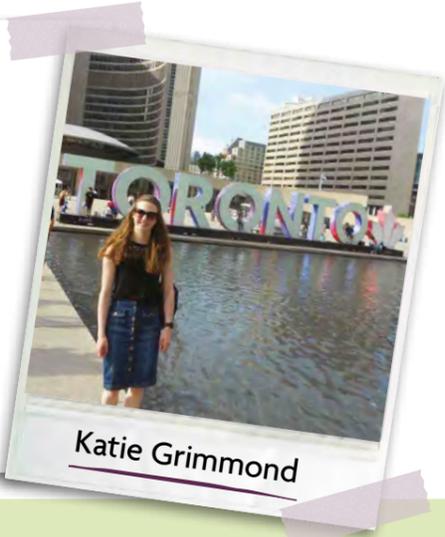
Highlights included workshops such as the gruesome 'Meet the Bloodsuckers' with Dr Jerry Sternberg and 'Friend or Foes - Our Changing Relations with Insects' with Dr Lesley Lancaster.

There was even a chance to get up close to honey bees from the safety of a glass observation hive with Dr Ewan Campbell and observe ants' nests with Jenni Stockan from the James Hutton Institute to understand how these exceptional eusocial insects work together in complex societies.

There was fun for all the family, and local children were delighted to meet 'Jungle Jess' from CBeebies who was on hand to judge our minibeast fancy dress parade, as well as doing book signings. The adults had fun sampling honey beer from '6 Degrees North', and we also engaged with academics from the College of Arts and Social Sciences who provided a wide range of interesting activities, including bee themed meditation, empathy workshops and workshops to explore our fears and phobias of insects, meaning there was something for everyone.

Our students have a unique opportunity to volunteer with our education and events programme whilst they study here, providing them with invaluable experience in public communication of science and education, and many of them played vital roles in supporting this high profile event. We hope they enjoyed taking part in it as much as we did!

I attended the Animal Behaviour Society Conference in Toronto which was an amazing experience. There was a symposium on animal cognition which was very interesting and included talks from many researchers whose work I had used in the literature review of my thesis. The whole conference allowed me to learn so much more about many aspects of animal behaviour through the variety of talks. I also attended a workshop at the conference on merging science and application in conservation which allowed us to discuss conservation problems with other scientists and propose possible solutions. There were many social events, including a film night with films showcasing worldwide nature, and there were many opportunities to talk to scientists from around the world about their research.



Katie Grimmond

# Congratulations to the Class of 2017!

The SBS graduation ceremony for our Undergraduate and Postgraduate students was held on Tuesday 20th June. It was followed by a Prize Giving ceremony in the Zoology lecture theatre and a Graduation Party in the Cruickshank Botanical Gardens.



It was great to see all our graduates dressed in their gowns and enjoying the occasion with their families.



It is always a proud moment for the School to see students graduate and know that all their hard work over the past four, five or more years has paid off. Well done to you all and we wish you the best of success in the future!

# Student Prizes & Scholarships

Scholarships are advertised in March each year and students need to submit their applications by the deadline to be considered. There are criteria for each scholarship which students need to meet. Some are only open to students studying a specific programme or the award is for a specific purpose like travel or research in a specified subject. We get many more applications than awards available so competition is fierce.

**Well done to all who were awarded scholarships in 2016/17 session!**

**WATT FUND** - Awarded to support ecological studies

**KATIE GRIMMOND (MSci Biological Sciences)**  
Katie used the award to attend the Animal Behaviour Society Conference in Toronto, Canada

**JENNYFER LECROART (MSci Biological Sciences)**  
Jennyfer used the award to help with costs associated with her project which evaluated the role of conspecific attraction during the settlement phase of dispersal in a reintroduced population of water voles in Scotland

**ELLA-SOPHIA BENNINGHAUS (BSc Marine Biology)**  
Ella will use the award to help her attend the Marine Mammalogy Conference on the Biology of Marine Mammals in Halifax, Nova Scotia, Canada

**LUIS PEREZ CALDERON (PhD Marine Biology)**  
Luis will use the award to help with costs associated with a collaboration project with Marathon Oil which aims to evaluate bacterial diversity and hydrocarbon degrading gene expression on core samples extracted from drill cuttings

**CHARLES SUTHERLAND SCHOLARSHIP** - Awarded to PG students working on a topic related to agriculture & the rural environment

**PANTHITA RUANGAREERATE (PhD Biological Science)**  
Panthita used the award to attend the Genetic Analysis of population-based Association Studies event at the Wellcome Genome Campus, Hinxton, Cambridge

**XIN SHU (PhD Biological Science)**  
Xin used the award to present her research at the Managing Global Resources for a Secure Future conference in Tampa, USA

**DEVELOPMENT TRUST STUDENT SUPPORT FUND 2016/17** - Awarded to UG, PGT or PGR students to support travel, conference fees, bench fees, equipment and expeditions which must be related to their academic studies

**KHADIZA BEGUM (PhD Environmental Science)**  
Khadiza used the award to attend the European Geosciences Union General Assembly in Vienna, Austria

**ALEXANDRA PUERTOLAS CERDA (PhD Plant and Soil Sciences)**  
Alexandra used the award to allow her to present her work at the Molecular Biology of Plant Pathogens Conference in Durham and the European Foundation for Plant Pathology Conference in Dunkirk, France

**LAURA WILLIAMSON (PhD Biological Science)**  
Laura used the award to attend and present her work at the Marine Mammalogy Conference on the Biology of Marine Mammals in Halifax, Nova Scotia, Canada

**ROY SCOTT LAMB FELLOWSHIP** - Awarded to support research in forestry or plant & soil science

**REBECCA SINCLAIR (BSc Forestry)**  
Rebecca used the award to attend the European Forest Field Course in Germany

**IMELDA UWASE (BSc Plant and Soil Sciences)**  
Imelda used the award towards costs associated with her internship at Rothamsted Research in Harpenden, Hertfordshire as well as further costs associated with her Honours project at the James Hutton Institute in Dundee

**NIKO JOHANSSON (BSc Biological Sciences)**  
Niko used the award towards costs associated with his summer internship at Royal Botanical Gardens in Kew

**ALFRED E CLYNE SCHOLARSHIP** - Awarded to support PG student travel in crop science & environmental sustainability

**ROSSLYN WATRET (MSc Applied Marine and Fisheries Ecology)**  
Rosslyn used the award to attend the Gill Health Initiative meeting in Bergen, Norway

**RITA RAZAUSKAITE (PhD Environmental Science)**  
Rita put her award towards costs for soil carbon fractionation as part of her PhD research

**SIR MAITLAND MACKIE SCHOLARSHIP PRIZE** - Awarded to support project-based work & fund travel and research materials

**DEON ROOS (PhD Ecology)**  
Deon used the award to help pay for travel costs whilst in Spain researching emerging agricultural rodent pests and how ecology can be used to inform sustainable and efficient management

**ZOOLOGY TRAVEL BURSARY** - Awarded to support field study or travel related to a zoological topic

**CARLA OSTERBURG (BSc Zoology)**  
Carla used the award to help fund her time as part of a volunteering program hosted by Cardigan Bay Marine Wildlife Centre in Wales

**W ROBIN LOW SPECIALIST SCHOLARSHIP** - Awarded to the successful recipient for the final two years of their Honours programme. Awarded on the basis of academic merit and financial need

**HOLLIE STURTON (BSc Conservation Biology)**

Our prizes are mainly performance based so are decided once all marking has been completed and a full picture of each student's performance is available. The majority of prizes are awarded to graduating students at the annual prize giving ceremony held on the day of graduation. We also award prizes for best Level 1, 2 & 3 students.

**Well done to all students who won prizes in 2016/17 session!**

**MARK YOUNG PRIZE FOR SERVICE** - Awarded annually to recognize a graduating student who contributed their service to their class & to the school over the course of their programme

**EMMA LINDSAY (BSc Marine Biology)**

**ROLAND MILLS PALMER MEMORIAL PRIZE** - Awarded annually to the best Honours project or essay in Environmental & Social Forestry or Community Conservation

**REBECCA SINCLAIR (BSc Forestry)**

**PROFESSOR IAN ALEXANDER PRIZE** - Awarded annually for outstanding performance in Ecology, Environmental Science & Conservation Biology

**VALENTINA GIOMBINI (BSc Conservation Biology)**  
**CORINNE DAVIS-COOKE (BSc Conservation Biology)**

**VERO COPNER WYNNE-EDWARDS PRIZE FOR BIOLOGY** - Awarded annually for outstanding performance in Biology

**KIRSTY MACKAY (BSc Biology)**  
**KATIE GRIMMOND (MSci Biological Sciences)**

**GORDON H RAE MEMORIAL PRIZE** - Awarded annually for outstanding performance in Marine Biology

**EMMA LINDSAY (BSc Marine Biology)**

**ZOOLOGY PRIZE** - Awarded annually for outstanding performance in Zoology

**REBECCA BARKSBY (BSc Zoology)**  
**HARRISON LEWIS (BSc Zoology)**

**DARWIN ANNIVERSARY PRIZE** - Awarded annually for outstanding performance amongst all UG students graduating in SBS

**SHANNON SMITH (BSc Conservation Biology)**

**INSTITUTE OF CHARTERED FORESTERS PRIZE** - Awarded annually to an outstanding student studying Forestry or Forest Sciences

**REBECCA SINCLAIR (BSc Forestry)**

**DICKIE PRIZE** - Awarded biannually to the best student on BII9P4 Plants and their Habitats in Northern Scotland Ecology

**JOSHUA STEVENS (BSc Ecology)**

**ROY LAMB PRIZE** - Awarded annually to an outstanding graduating student on the Forestry, Forest Sciences, Environmental & Forest Management or Plant & Soil Science programme

**DUNCAN ORR (BSc Forest Sciences)**

**OUTSTANDING STUDENTS IN SBS AWARD** - Awarded annually to top performing Level 1, Level 2 & Level 3 students

**Outstanding Student in SBS Award - Level 1**  
**TIMOTHY MOULDS (BSc Zoology)**

**Outstanding Student in SBS Award - Level 2**  
**NINA LOBETO (BSc Marine Biology)**

**Outstanding Student in SBS Award - Level 3**  
**JEAN-BAPTISTE GRAMAIN (BSc Marine Biology)**

# Postgraduate Symposium for 2nd & 3rd year PhD students to present their findings



The 2nd year PhD students presenting their research posters to the University community

Our Postgraduate Symposium is an excellent opportunity to hear about the quality and breadth of research ongoing within the school, and to network within the PGR community.

Each year we hold a two day Postgraduate Symposium, where the 2nd and 3rd year PhD students present their findings. Our 3rd year students do a short 10 minute talk and answer questions on their research project, whilst our 2nd year students present a research poster of their project.

**PRIZES WERE AWARDED TO THE FOLLOWING THREE PHD STUDENTS**

**Outstanding student contribution to the scientific community**

**FRANCESCA MANCINI (PhD Ecology)**

**Best Poster**

**MORITZ POHL (PhD Zoology)**

**Best Talk**

**WILLIAM MORGAN (PhD Ecology)**

## Student & Staff Awards



L/R: Alexandra Puertolas, Ewan McHenry, Shaun Fraser

### Student Awards

#### ALEXANDRA PUERTOLAS (PhD Plant & Soil Sciences)

Alexandra was awarded one of the three poster awards for non-French speakers at the EFPP (European Foundation of Plant Pathology) and SFP (French Society for Plant Pathology) Conference held in Dunkirk, France. This conference 'provides the opportunity to present the latest advances in all fields of Phytopathology'.

Alexandra's poster was entitled 'Detection, Identification and Quantitation of Oomycetes in Imported Nursery Plants' and was co-authored by Professor Steve Woodward, Dr Eric Boa and Dr Peter Bonants (Wageningen University & Research).

#### EWAN McHENRY (PhD Ecology)

Ewan was awarded the Best Student Poster Prize at the International Island Invasive Conference held at the University of Dundee. This conference is an international gathering of conservation practitioners and researchers seeking to restore ecosystems affected by non-native invasive species worldwide.

Ewan's poster was entitled 'The Value of Monitoring and the Price of Uncertainty in the Management of an Invasive Population' and was co-authored by Professor Xavier Lambin, Dr Thomas Cornulier and Professor David Elston (Biomathematics & Statistics Scotland).

#### SHAUN FRASER (PhD Engineering)

Shaun was a finalist in the Academic Award category at the Young Professionals Green Energy Awards. The award was given to 'a talented graduate or student who has delivered exceptional work on a project or course'. Shaun is co supervised by Dr Beth Scott and Dr Benjamin Williamson with his lead supervisor being Professor Vladimir Nikora (School of Engineering).

### Staff Awards

#### PROFESSOR PETER SMITH FRS (Chair in Plant & Soil Science)

Pete Smith was recently elected a Fellow of the Royal Society (London; 2017). After obtaining a PhD in 1991, Pete worked as a Higher- then Senior-Scientific Officer at the MAFF Central Science Laboratory until 1994. He then worked as a Band 6 and Band 5 Senior Research Scientist at Rothamsted Research before joining the University of Aberdeen as a Senior Lecturer in 2001. He became a Reader in 2003, and Professor of Soils & Global Change in 2005. His main areas of expertise are in modelling greenhouse gas/ carbon mitigation, bioenergy, biological carbon sequestration, global food systems modelling and greenhouse gas removal technologies. He is co-leader with Professor Jo Smith of the Environmental Modelling Group (two Academic staff, two Senior Research Fellows, 18 Post-docs, 19 PhDs).



L/R: Professor Peter Smith FRS, Professor James Prosser OBE FRS, Professor Stephen Redpath, Dr Benjamin Williamson

He is also Science Director of Scotland's Climate Change Centre of Expertise, and was Director of Food Systems of the Scottish Food Security Alliance-Crops, and Theme Leader of the University-wide theme, Environment and Food Security until 2015. He is editor of Global Change Biology and Global Change Biology Bioenergy.

#### PROFESSOR JAMES PROSSER OBE FRS (Chair in Molecular & Cell Biology)

Jim Prosser was elected a Fellow of the Royal Society (London; 2016). Jim is a microbial ecologist who has contributed significantly to the understanding of the ecosystem function and diversity of microorganisms in natural environments. His main research focus has been the ecology of soil ammonia oxidising bacteria and archaea. These reduce significantly how effective nitrogen fertilisers are, as well as generating greenhouse gases. He has found links through his research, between soil ammonia oxidisers and their ecosystem function as well as differentiation and niche specialisation in archaeal and bacterial ammonia oxidisers. As microorganisms perform and control the fundamental processes required for the global cycling of nutrients and sustainability of ecosystems, Jim's research looks at the ways in which microorganisms grow and survive in natural environments and of the factors controlling microbial species diversity and community structure. Jim's research group utilises a range of molecular and traditional techniques applied to laboratory, microcosm, and field systems to investigate and determine these controlling factors.

#### PROFESSOR STEPHEN REDPATH (Chair in Conservation Science)

Steve Redpath undertook a guest professorship in Sweden and delivered a public lecture to delegates including Swedish royalty earlier this year. Steve was the 2016/17 holder of the King Carl XVI Gustaf Professorship in Environmental Sciences at the Swedish University of Agricultural Sciences which is a prestigious selective, appointment awarded by the Royal Swedish Academy of Sciences to one or two people annually. As part of the professorship, he spent one year in Sweden linked to the SLU research station in Grimsö and ran projects with researchers from Lund and Umeå Universities. During his time, he delivered a lecture on 'Finding Solutions to Wildlife Conflicts' and afterwards was introduced to King Carl XVI Gustaf of Sweden. Professor Redpath said: "It was a fantastic day. The King was genuinely interested in the subject and saw the need for new approaches, linking ecology with psychology and political science."

#### DR BENJAMIN WILLIAMSON (Research Fellow)

Ben won the Engineer Award at the very prestigious Young Professionals Green Energy Awards. This award was given for 'outstanding design, solution or other engineering achievement by an individual'. The Ceremony was held at Glasgow Science Centre and 'celebrates and recognises the next generation of leaders in renewables - those who will be driving Scotland's future energy evolution'. Ben will now go on to compete for the Rising Star Award at the Scottish Green Energy Awards to be held in Edinburgh.

#### PROFESSOR JANE REID FRSE (Personal Chair)

Jane Reid was elected a Fellow of the Royal Society of Edinburgh (2017). Jane did her degree in Natural Sciences (Zoology) at the University of Cambridge, and then a PhD in behavioural ecology at the University of Glasgow. She spent two years on a Killam Postdoctoral Fellowship at the University of British Columbia, followed by a Junior Research Fellowship at Jesus College, Cambridge. Jane joined the University of Aberdeen as a Royal Society University Research Fellow in 2006. She was awarded a personal research Chair in Population & Evolutionary Ecology in 2014. Jane's academic career in ecology is balanced by her experience and enthusiasm as a field naturalist; she has worked at bird observatories and on numerous field projects in the UK and elsewhere. Jane is committed to using a combination of fieldwork, rigorous analyses of long-term data and modelling to gain an integrated understanding of the structure, and population and evolutionary dynamics, of natural populations. She actively translates her research into public understanding and population management policy.



Professor Jane Reid FRSE



Photo: Jean-Paul Schmit

# Grants Awarded to School of Biological Sciences

1ST FEBRUARY 2017 TO 30TH JUNE 2017

## KEY

RS - Royal Society

SFC - Scottish Funding Council

EC - European Commission

BBSRC - Biotechnology & Biological Sciences Research Council

DEFRA - Department for Environment, Food & Rural Affairs

BC - British Council

JHI - James Hutton Institute

EPSRC - Engineering and Physical Sciences Research Council

NERC - Natural Environment Research Council

**Dr Greta Bocedi** > RS, £477,497

Eco-Evolutionary Dynamics of Dispersal and Mating System in a Changing World

**Prof David Burslem** > SOUTH EAST ASIA RAINFOREST RESEARCH PARTNERSHIP, £13,187

Conservation Mapping for New Protected Areas of Sabah

**Dr Diana Feliciano & Dr Jonathan Hillier** > INTERNATIONAL CENTRE FOR TROPICAL AGRICULTURE, £28,979

Phase III - Ground Truth the CCAFS-MOT

**Dr Paul Fernandes** > SFC, £7,000

Fisheries Forum Equipment Pool Award

**Dr Hugh Galbraith** > SFC, £5,000

Environmentally Sustainable in Winter Feeding for Optimising Early Venison Production by Red Deer

**Dr Cécile Gubry-Rangin** > RS, £150,352

Unravelling the Metabolic Versatility and Diversity of Abundant but Unexplored Terrestrial Thaumarchaeota

**Prof Paul Hallett** > SFC, £1,200

SAGES PECRE Award for Rong Qu Exchange to Soil Science; Najing; China

**Dr Astley Hastings** > NERC, £146,121

FAB GGR: Feasibility of Afforestation and Biomass Energy with Carbon Capture Storage for Greenhouse Gas Removal

**Dr Jonathan Hillier** > COOL FARM TOOL ALLIANCE, £5,891

Update of Emission Factors

**Prof Frithjof Kuepper** > EC, £71,992

Re-Designing the Value and Supply Chain of Metals and Minerals: A Circular Economy Approach for the Recovery of Resources from Saline Impaired Effluent (Brine) generated by Process Industries (Zerobrine)

**Dr Lesley Lancaster** > NERC, £88,292

Population Connectivity of Native and Invasive Species in the Fens: What Are Appropriate Habitats For Conservation?

**Dr Daniel Macqueen** > SFC, £3,000

Nanopore Sequencing the Causative Virus of Infectious Salmon Anaemia: A Problem Disease for Scottish Salmon Aquaculture

**Dr Daniel Macqueen** > SFC, £1,500

Novel Sequencing Approaches to Characterize Viral Diseases in Salmon Aquaculture: An Undergraduate Research Experience

**Dr Catherine Marshall & Dr Jonathan Hillier** > NAFC MARINE CENTRE, £33,067

Climate Smart Fishing: Identifying Climate Smart Development Pathways for the Scottish Pelagic Fishing Industry (50:50 Studentship)

**Prof Samuel Martin** > SFC, £3,000

Fish Cell Lines for Viral Diagnostics: Genotypic and Phenotypic Characterisation of a CRISPR/Cas9 knock out Salmonid Cell Line

**Prof Adam Price, Dr Gearoid Millar (School of Social Science) & Dr Gareth Norton** > SFC, £9,050

Assessing and Understanding the Barriers to Alternative Wetting and Drying in Rice Agriculture for Poverty Alleviation and Food Security in Bangladesh

**Prof James Prosser** > NCIMB LTD, £15,084

Staff Secondment Agreement Relating to Professor J Prosser

**Prof Stephen Redpath** > BC, £69,993

Advancing Equity in Brazilian Protected Area Management

**Prof Stephen Redpath & Prof Michelle Pinard** > HEDMARK UNIVERSITY COLLEGE, £450

Travel Grant for Zoe Morris-Trainor

**Prof Jane Reid** > NERC, £88,292

Quantitative Assessment of Supplementary Feeding and Adaptive Management Strategy for Red-Billed Choughs

**Dr Beth Scott** > NERC, £88,292

Individuals to Populations: The Potential Effects of Large Tidal Arrays on Mobile Marine Populations

**Dr Beth Scott** > £84,000

Environmental Studies of the Tidal Turbine Array

**Dr Beth Scott** > £7,500

Environmental Monitoring Instrumentation

**Dr Beth Scott** > SFC, £1,600

MASTS Internship

**Prof Christopher Secombes** > BC, £10,200

Newton Fund: Newton Bhabha PhD Placements

**Prof Christopher Secombes & Prof Samuel Martin** > £63,068

Gut Leucocytes as a Screen for the Health Impact of Functional Feeds (PhD Student)

**Prof Christopher Secombes & Prof Pieter Van West (PI) (School of Medicine, Medical Sciences & Nutrition)** > BBSRC, £335,026

Risk Factors for Escalating Saprolegniosis Outbreaks in Salmon Farms (RIFE-SOS)

**Prof Joanne Smith** > CONSTRUCTION SCOTLAND INNOVATION CENTRE, £3,599

Preliminary Analysis of the Environmental Benefits and Impacts of Removing or Repurposing Wind Turbine Bases in Terrestrial Systems; particularly Peatlands

**Prof Joanne Smith, Prof Euan Phimister (Business School) & Prof Paul Hallett** > NERC, £29,212

Building Resilience In Ethiopian Awassa Region To Drought (BREAD)

**Prof Peter Smith** > JHI, £14,741

Biophysical Boundaries of the Scottish "Doughnut" (Studentship)

**Prof Peter Smith** > DEFRA, £6,000

Developing a Modelling Tool to Assist with Prioritising Investments in Natural Capital

**Prof Peter Smith & Dr Alexander Douglas** > BBSRC, £8,176

Genome-Wide Association Mapping and Landscape Modelling of Heritable Ionomic Diversity in Arabidopsis Populations

**Prof Peter Smith, Dr Astley Hastings & Dr Diana Feliciano** > EPSRC, £160,161

Assessing Potential, Feasibility and Impacts of Bioenergy with CCS (BECCS) in the UK (Assess-BECCS)

**Prof Peter Smith, Dr Jonathan Hillier & Dr Diana Feliciano** > NERC, £420,849

Soils Research to deliver Greenhouse Gas Removals and Abatement Technologies (Soils-R-GREAT)

**Prof John Speakman** > THE RESEARCH COUNCIL OF NORWAY, £64,531

Trapped in a Cold Adapted Body: The Responses of Svalbard Reindeer to Climate Change

**Prof John Speakman** > CHINESE ACADEMY OF SCIENCES, £16,858

Metabolism of Langurs from the Karst Habitat in Southern China

**Prof John Speakman & Dr Alexander Douglas** > BBSRC, £550,671

The Role of Hypothalamic Neuropeptide Network in Regulating Tissue Sizes in Response to Diet Energy Content and Composition

**Dr Tyler Stevenson** > SOCIETY FOR REPRODUCTION AND FERTILITY, £2,750

Hypothalamic DNA Methyltransferase 3a Plasticity across the Estrous Cycle in Siberian Hamsters

**Dr Tyler Stevenson** > BRITISH SOCIETY FOR NEUROENDOCRINOLOGY, £1,000

An Investigation into the Impact of Photoperiod and Food Restriction on Hypothalamic DNA Methyltransferase (1;3A and 3B) and ten-eleven Translocation Enzyme (TET-1; -2) Expression In The Siberian Hamster (Phodopus Sungorus)

**Prof Paul Thompson** > MARINE SCOTLAND, £17,924

Spatio-Temporal Variation in Harbour Porpoise Distribution and Activity (Studentship)

**Prof Justin Travis** > EC, £155,203

Ecology and Evolution of Prospecting Strategies (EcoEvoProspectS) (Fellowship)

**Prof Rene Van Der Wal** > BIG LOTTERY FUND, £95,426

Open Air Laboratories

**Prof Ursula Witte** > NERC, £18,250

Continuous Observation of Deep-Sea Benthic Community Structure and Benthic-Pelagic Coupling throughout the Polar Night and Summer Ice Melt

**Prof Ursula Witte** > SFC, £1,178

Grant for Sample Analysis