Recent publications in the school


In the spotlight

Invitation to be co-signatory on article "World Scientists' Warning to Humanity: A Second Notice" in BioScience Magazine

Twenty five years ago, in 1992, the Union of Concerned Scientists and more than 1,500 scientists published the famous declaration entitled "World Scientists' Warning to Humanity". They called on humanity to curb environmental destruction, warning “all humanity that a great change in our stewardship of the earth and the life on it is required, if vast human misery is to be avoided.” Now, on the 25th anniversary of their famous call, we looked back at their warning and evaluated the human response over the last quarter century. This 25-year update will soon be published by BioScience.

To see the in-press article “World scientists' warning to humanity: a second notice” and add your name as a co-signatory, click: [http://scientistswarning.forestry.oregonstate.edu/](http://scientistswarning.forestry.oregonstate.edu/)

This short article is only 1,000 words long and can be read in 6 minutes. If you are a scientist, we invite you to endorse this article by adding your name to the co-signatory list. In doing so, when the article is published by BioScience, you will be included in the full list of co-signatories in the article’s online supplemental material.

Please forward this email to any other scientists in your contact list that may also be interested in signing. For example, if you are an IPCC climate scientist, you could simply forward this email to your working group. If you use Twitter, consider inviting your colleagues to add their signatures by including #ScientistsWarningToHumanity in a tweet.

With your help, by forwarding this email to your scientist contacts, we will have many more scientists as co-signatories to present to world leaders. The deadline for signing is September 19, 2017. Thanks for helping get this important message to world leaders. As of today, August 18, 2017, the article has been signed by about 5,400 scientists from 127 countries.
Events

Biological Sciences Seminar

Thursday 31 August, 12 noon, seminar room 275
From the Torrey canyon to today: a 50 year retrospective of recovery from the oil spill and interaction with climate-driven fluctuations on British rocky shores
Prof Steve J. Hawkins1,2, Erskine Fellow
Eve C. Southward1, Ally J. Evans2, Kathryn E. Pack1, John A. J. Readman1, Leoni C. Adams1 and Nova Mieszkowska1,3.
1 The Marine Biological Association of the UK, The Laboratory, Citadel Hill, Plymouth, PL1 2PB, UK
2 Ocean and Earth Science, University of Southampton, National Oceanography Centre Southampton, Southampton SO14 3ZH, UK
3 School of Environmental Sciences, University of Liverpool, Liverpool L69 3GP, UK

The Torrey Canyon oil spill in 1967 occurred near to a centre of scientific excellence – The Marine Biological Association (MBA) of the UK, whose staff were mobilised to deal with the spill for six weeks (Smith 1968). MBA scientists (Alan and Eve Southward) were subsequently involved in long-term studies of recovery of rocky shores for the next ten years continued at one of the worst affected shores (Porthleven) with Steve Hawkins since 1980 and Nova Mieszkowska since 2002.

Many of the rocky shores affected by the spill and unaffected controls had been studied from the early 1950s, with the Southwards charting fluctuations of rocky shore fauna and flora in relation to climate. Thus, a baseline existed against which to judge recovery of rocky shores from the beached oil and the excessive application of toxic first generation dispersants. A reminder is given of the first ten years of observations on recovery of shore communities and subsequent follow-up work suggesting recovery took up to 15 years on the shore (Porthleven) subject to the most severe dispersant application. In contrast, recovery occurred in 2-3 years at a site (Godrevy) where dispersants were not applied due to concerns about the impact on seals. The dispersants killed the dominant grazer, limpets of the genus Patella, leading to massive subsequent colonisation by algae. The resulting canopy of fucoid algae facilitated dense recruitment of limpets. These grazed the seaweeds down, before the starving limpets largely died off after migrating across the shore in search of food. This reduction in limpet numbers and grazing pressure then prompted a further bloom of algae. Normal levels of fluctuations returned from the mid 1980s and have been charted to date. At Porthleven sustained observations over five decades (1967-2016) revealed when return to the typical range of spatial and temporal variation on rocky shores occurred.

Lessons learnt from observations stretching back 60 years, both before and after the spill, for rocky shore monitoring are highlighted – especially the need for broad-scale and long-term monitoring to separate out local (such as oil spills) and regional scale impacts (TBT pollution) from global climate-driven change.

BIC Biomedical Symposium

Monday 18th September
BIC, in collaboration with the University of Otago, Christchurch School of Medicine are holding a half-day symposium that will bring together leading researchers in the biomedical sciences (the application of the biological sciences, especially biochemistry, molecular biology and genetics, to the understanding, treatment and prevention of human disease).

The programme will be led by Professor Mark Hampton and Associate Professor Renwick Dobson. The programme includes the following talks/speakers:

- Glutamate Racemase from Mycobacterium tuberculosis is a new target for antituberculosis drug design
  Professor Kurt Krause, Director of the Webster Centre for Infectious Diseases, Biochemistry Department, School of Biomedical Sciences, University of Otago
- Metagenomic discovery of new natural products from free living and symbiotic bacteria, Dr Jeremy Owen, School of Biological Sciences, Victoria University of Wellington
- Dr Kristin Brown, Cancer Therapeutics Program, Peter MacCallum Cancer Centre, Melbourne
Dr Andrew Cox, Organogenesis & Cancer Program, Peter MacCallum Cancer Centre, Melbourne

The Ecology of Bacterial Individuality - Understanding Bacteria One Cell at a Time, Dr Mitja Remus-Emsermann, School of Biological Sciences and Biomolecular Interaction Centre, University of Canterbury

Dr Antonia Miller, Protein Science and Engineering, Callaghan Innovation

More speakers will be announced soon. We are also keen to run a poster competition, so please indicate when you register if you would like to display a recent research poster.

Registration is free and we welcome anyone who would like to attend, so feel free to pass this email on. Afternoon tea will be provided. The symposium will run from 12.30pm - 5.20pm followed by drinks at the nearby Pegasus Arms Hotel.

Please visit the BIC website to register for catering purposes http://www.canterbury.ac.nz/bic/events/

MapNet

2nd and 3rd November 2017
Palmerston North - registration now open

The MapNet2017 conference committee is happy to announce that the registration is now open and we are calling for abstracts addressing key themes about genomics, bioinformatics, quantitative genetics and conservation genetics. This MapNet conference presents an opportunity for sharing ideas, new innovations and technologies and experience in the field of genomics throughout New Zealand.

For all the key information about the conference, including registration, abstract submission, themes and key dates please visit the MapNet2017 website: http://scienceevents.co.nz/mapnet

Scholarships

Technology / Energy Scholarships - The Dick and Mary Earle and the Todd Energy

Dick and Mary Earle Scholarship
Todd Foundation Energy Scholarship

The closing date for both is 1st September.

PhD Scholarships in Alpine Evolutionary Ecology in Australia

Application deadline for international students is August 31 and for Australian and New Zealand residents is October 31

Project Areas in Brief:
* Multi-trait plasticity in an Australian alpine herb in response to warming – epigenetic and ecophysiological underpinnings. Supervisors Profs Adrienne Nicotra, Loeske Kruuk (ANU) and A. Prof Christina Richards (Uni South Florida, USA).

* The adaptive potential of woody plants in the Australian Alps. Supervisors: Dr Susanna Venn & Prof Adrienne Nicotra (ANU) and Prof Ary Hoffmann (Uni Melb).

Suitable applicants need to be highly motivated with strong academic and research backgrounds; skills in plant evolutionary ecology, environmental physiology and/or ecological and evolutionary genetics are required. Demonstrated ability to conduct fieldwork, and independent research experience are highly desirable. Interested students must apply for admission and scholarship online at ANU.

Successful applicants will receive scholarship stipend, tuition fee waiver, research funds including computer and travel grants. Full details.
150 Years of Discovery: Emerging Research video competition.

Applications close: Friday 8th September

The Royal Society Te Apārangi Early Career Researcher (ECR) Forum invites New Zealand’s ECRs and postgraduate students to celebrate and share their research, innovations, discoveries and insights through the 150 Years of Discovery: Emerging Research video competition.

The research being conducted by ECRs in New Zealand is driving the future of science, society, and culture; contributing to the growth of our economy, industry, and cultural sectors in New Zealand and globally. The 150 Years of Discovery video competition provides ECRs with an opportunity to express their passion for innovative research by showcasing their discoveries in a short 3 minute video and sharing it with the public and their fellow researchers.

With the generous help of our sponsors, we are providing three prizes: a Future Leader Award and two People’s Choice Awards. All three winners will receive cash prizes to contribute to their future research goals, while the winner of the Future Leader Award will also present their winning video at the Royal Society Te Apārangi Gala Dinner on 10 October 2017. Apply here.

PhD project

Exploring māori restoration values, priorities and approaches in urban contexts

Application closes: Friday 8th September

Are you a committed student with an environmental background and a strong interest in working with iwi? We are looking for a PhD student who will focus on kaitiakitanga in cities, and how that is expressed by Māori city residents. The student will develop a survey and carry out interviews in three cities in the first year exploring Māori restoration values, priorities and approaches in urban contexts, but also will have the opportunity to develop the project according to their interests and skills. Check it out.

Vacancies

Postdoc opportunity: John Innes Centre, United Kingdom

Application closes: 14th September

The BBSRC Brassica Rapeseed and Vegetable Optimisation (BRAVO) project (https://www.jic.ac.uk/bravo/) brings together UK plant scientists and industries representing horticultural and oilseed Brassica crops to increase robustness in crop performance, combating environmental change.

Flowering time, inflorescence architecture, flower, fruit and seed characteristics are controlled by environmentally responsive gene networks with many shared components. The BRAVO programme aims to exploit natural variation within oilseed rape and vegetable brassicas to understand the gene networks controlling flowering time and study how these networks affect key developmental stages from vegetative growth to seed production. Understanding different traits requires an integrated view of gene networks across development in different tissues and how these are affected by environmental cues, especially temperature. Full details/Apply

Lecturer in Climate Change and the Environment - 4 posts

Grantham Institute - Climate Change and the Environment, Faculty of Natural Sciences

Salary: £47,910 to £53,400 per annum Campus: South Kensington Campus

Closing date: 21 September 2017 (Midnight BST)
The Grantham Institute is seeking applications for four lectureships, starting in the 2017-18 academic year. The positions are open to those working at key disciplinary interfaces relating to the understanding of, and responses to, climate and environmental change, within the broad fields of Engineering, Science, Medicine and Business. We also welcome applications from those with expertise in energy modelling and integrated assessment models. During the initial three-years, the lectureships will be based at the Grantham Institute, before formally transferring to an appropriate academic Department at Imperial.

Appointees will be expected to broaden the College’s research capabilities, complementing our existing strengths. They will build on a successful programme of engagement and development at the Institute, working to inform decision-making in business and policy, and drive forward research and collaborations across the areas of climate and environmental change.

These lectureships represent a significant investment in climate change and environment research by the Institute, and aligns with the College’s strategy for investment in multidisciplinary research around four interconnected global challenges: Discovery and the natural world; Engineering novel solutions; Health and well-being; and Leading the data revolution. Further details can be found in the College Strategy 2015-2020.

The successful candidates will have a good honours degree and a doctorate that demonstrate their effectiveness at working at a disciplinary interface of the climate change/environment debate. They will also be expected to demonstrate a strong research record, including a growing international reputation for research and innovation in an area of climate or environmental activity within the College’s remit, which is commensurate with their career stage. The successful candidates will have a broad knowledge of global climate and environmental issues and an awareness of relevant government and business interests, preferentially having provided advice on such areas to stakeholders in government and business. Evidence of attracting research funding and/or bids for other financial support, or an equivalent measure of impact, together with experience of planning and undertaking effective collaboration with external partners, are also essential.

The successful candidates will have excellent interpersonal, verbal and written communication skills, with the ability to convey ideas and concepts clearly and effectively to a range of audiences through a variety of methods and media. They will also have experience of teaching excellence at undergraduate and/or postgraduate level, and be able to demonstrate strong leadership potential. For informal discussions about these positions, please contact the co-directors of the Grantham Institute (Professors’ Joanna Haigh, j.haigh@imperial.ac.uk; or Martin Siegert, m.siegert@imperial.ac.uk).

Postdoc position, plant water relations, UC Davis

**Job Description:** A postdoctoral position in the UC Davis lab of Ken Shackel (department of Plant Sciences) is available to cooperate in the development of a micro-tensiometer for continuous in-situ measurement of water potential in grape vines and other woody perennial crops under field conditions.

**Qualifications:** A PhD is required. Applicants should have familiarity with the fields of plant water relations, xylem anatomy/hydraulics, and the physical principles of the measurement of water potential in plants or soils, and either have a demonstrated expertise in one or more of these fields, or a strong background in physics or engineering. The successful candidate should be able to work independently, read the literature critically, and be highly motivated and productive. Applicants with a proven record of publications in peer-reviewed journals and strong verbal and written communication skills will be preferred.

**Compensation:** $48,216/yr + Benefits

**Term:** Full term, one-year commitment with two-year expectation, contingent upon continued satisfactory individual productivity and cooperation with other team members.

**Start:** ASAP

**How to apply:** Submit a letter of application, indicating your specific background and experience relevant to the job description, curriculum vitae, and the names and emails/contact information of three references, to Ken Shackel at kashackel@ucdavis.edu.

Post-doctoral positions in tomato functional genomics

Two postdoctoral positions are available that focus on genes and regulatory pathways that lead to fruit size and shape variation using tomato as a model. One project focuses on the effects of structural variation in
tomato genomes. The goals are to identify structural variants and associate them with phenotypes. The second project focuses on mining of ancestral tomato germplasm for crop improvement traits. The goals of the latter project are to recognize in semi-domesticated germplasm alleles that lead to tomato improvement. For both projects, the postdoctoral associates will be part of a team of researchers who are collaborating on various aspects of tomato genetic diversity, genome sequence variation and fruit/inflorescence development. Both projects will integrate classical and quantitative genetics, QTL and RNA-Seq, molecular biology, genome editing, plant development and bioinformatic techniques. Review of applicants will begin September 1, 2017 and continue until filled. Full details.

PhD scholarship from the Institute of Environmental Science and Research Ltd (ESR), New Zealand

Studying Legionella mobility and persistence in plumbing systems using micro mimics

We are seeking a highly motivated PhD student to study the mobility and persistence of Legionella in plumbing systems using biopolymer-based micro mimics. The PhD study forms part of a 3-year multi-disciplinary Marsden Fund project awarded by the Royal Society of New Zealand.

The position will close once a suitable candidate is found so we encourage applicants to apply promptly. The starting date will be as soon as possible. Read here for full details.

What song is that?

Jaws all on the floor like Pam and Tommy just burst in the door.
407: Take a jumbo cross the water.
Answer: Breakfast in America, Supertramp (1979)
Guessed by: Lyn

Classified

Local honey for sale
1 kg $10, 500 g $5. 2017 season, multi-floral Ilam garden honey in plastic pottles. Soft granulated. I will deliver to the School of Biological Sciences or arrange pickup/delivery elsewhere. Harry Taylor, email: harry.taylor@canterbury.ac.nz; ph/txt: 021 292 5319

Wanted: Data Science Summer Projects

The first cohort of MADS of students (MSc. in Applied Data Science) are looking for projects to work on over the summer. The will have training in data wrangling, analysis, management, ethics and big data. The project is worth 45 points (DATA601, EFTS for SBS), and will typically be run between November and February. There are ~40 students who need to be placed on either industry or academic projects. They will be assessed based upon a write-up, peer-assessment and a presentation of their results.
If you have a suitable project, then please email the details to james.williams@canterbury.ac.nz

Looking for part time/full time work

I am a University of Otago graduate who completed a BSc (Hons) with First class majoring in Anatomy. My degree also included papers physiology, neuroscience and microbiology. I am looking for positions available as a lab demonstrator, assistant research fellow or anything else - contact me at 0276340637 or davidtimajo@gmail.com
Experienced editor available

Experienced editor available online for essays, dissertations, theses and for postgraduate’s papers and publications. Specialist help for students whose first language in not English (ESL).

Virginia Gray, BSc (Canterbury), Dip.Edit.
gray.edit@clear.net.nz 027 419 1046

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Joan Gladwyn, BSc, MSc, CPhys, DipEdit
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...and now for something completely different

Ameow-zing 50 box cat maze!

Carpool Karaoke: The Series — Will Smith and James Corden — Apple Music

Thought for the week

Home is where the heart is, even if you can’t remember which box you packed it in.

Contact details

If you have items of news or interest that you would like included in this newsletter, contact the admin office before noon on Friday at BIOLAdminSharedMailbox or phone ext 95200.