

### Zoology alumni

### October 2015

Your alumni number is ##



#### Dear alumni

Welcome to our second news e-letter for Zoology alumni. We had some excellent feedback from the first newsletter, including memories of the highly subversive International *Serpentarius* of the late 1970's. Please **let us know** if you have ideas about items that we might include in future editions of the newsletter.

The leading article illustrates the current influx of very welcome new blood to the Department. In addition to these three new University Teaching Officers, the Department is also delighted to announce the arrival of eight new Senior Research Fellows. The two Sir Henry Dale Fellows are featured in this newsletter, and the other new Fellows (two Marie Curie, two Leverhulme, one Herschel-Smith, and one RS/Wellcome) will feature in later editions.

We have just completed a series of events specifically designed for Zoology Alumni, as part of the Cambridge Alumni Festival 2015. These included tours of the Museum stores and of some labs that were open in the main department: 213 people took part and everyone seemed to have a good time. Nick Davies's lecture on Cuckoos, on the afternoon of Saturday September 26th, was relished by an enthusiastic crowd, some of whom came back for a drinks reception in the Elementary Laboratory of the Main Department. It was good fun to be able to discuss events of the past and plans for the future with a wide range of alumni.

Next year will be the 150th anniversary of the department, and we would be delighted if you could join us for lectures, social events and to meet our special guests taking place from Friday 23 September to Sunday 25 September 2016 so please spread the word. If there is a particular kind of event that you think is appropriate in our Anniversary year or you would like to run an event **please tell us**.

We would be delighted to answer any of your questions and to hear your views, please **email Rachel**. We particularly look forward to welcoming many of you back to the department over the coming years. If you know other Zoology Alumni who might be interested in this newsletter, please do pass it on to them. If this newsletter has been forwarded to you by a kindly soul and you would like to be added to the mailing list **please contact us**.

If you have news or photographs from your student days that you would like to contribute to the Lent newsletter please send them in, we would be delighted to include them.

Best wishes

William Foster

Director of Alumni Relations, Teaching Staff: 1976-present



## **Zoology welcomes** three new members of academic staff

Zoology is delighted to welcome three new academics to the staff this year.

## **Jason Head**

Jason has been appointed as a Lecturer and Curator of Vertebrate Palaeontology, in succession to Jenny Clack. Jason is a vertebrate palaeontologist and evolutionary morphologist who studies the anatomy of living and fossil reptiles in order to understand the relationship between regulatory gene systems and the evolution of body forms, as well as the historical relationship between ecology and climate change.



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## **Eske Willerslev**

Eske will succeed Tim Clutton-Brock as the new Prince Philip Professor of Ecology and Evolutionary Biology. Eske is an evolutionary biologist known for his pioneering work on Ancient DNA. He is currently a professor at Copenhagen University and director of the Centre of Excellence in GeoGenetics.



### **Marta Zlatic**

Marta has been appointed as a Lecturer in Neuroscience. Marta studies the neural and genetic basis of behaviour, including sensory processing, decision making, and motor production in Drosophila larvae.

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## Nicely brought-up beetles become good parents themselves

Burying beetles look after their young, and recent work by Rebecca Kilner and her group shows that high-quality parents produce offspring that grow up to become good parents themselves.

This is important because it provides a non-genetic mechanism by which behaviour can be inherited, which has the potential massively to speed up the pace of evolution.

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## Just one bite: a personal perspective on dengue fever

Leah Katzelnick was all set for a career as an anthropologist until she contracted dengue fever. It changed her life. She persuaded Derek Smith to take her on as a PhD student, focussing on the dengue virus. Together, they established the Dengue Antigenic Cartography Consortium, a global collaboration of researchers, to study how dengue viruses are recognized by the immune system. She is now the lead author of a paper in *Science* which potentially provides the key to understanding how the virus evolves, which viruses individuals will be protected against, and why some second infections with dengue are much more life-threatening than the first.

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## Mate-finding made easy: crickets do it with just five nerve cells

Berthold Hedwig and his research group have identified an ingeniously elegant brain circuit consisting of just five nerve cells that enables females to detect if a chirp is from a male of the same species. As Berthold says "I would say it's impossible to make the circuitry any simpler. That's the beauty of nature, it comes up with the most simple and elegant ways of dealing with and processing information.".



# Mantises harness mid-air spin for precision landings

Malcolm Burrows and his colleagues have found that most small insects - fleas, grasshoppers etc - spin uncontrollably when they jump. High-speed videos reveal how baby mantises both create and control their body spinning, at extraordinary speed, so that they can land with precision.

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## Life before fertilisation in fruit flies

Before fertilisation, insect eggs undergo activation: a hierarchy of events required to transform a quiescent oocyte into a cell with the potential to form a fully functioning organism. Tim Weil's Lab is working to understand how this essential event is both initiated and progresses. This is important for understanding how fertilisation successfully occurs and the mechanisms of early animal development.

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### **Henry Dale Fellowships**

The department is delighted to welcome two new Sir Henry Dale Fellows, Dr Paul Conduit and Dr Jimena Berni. These prestigious fellowships, funded by the Wellcome Trust, are designed for outstanding postdoctoral scientists wishing to build their own UK-based independant research career addressing an important biomedical question.

#### **Read more**

## Pat Bateson is awarded the 2014 Frink Medal by the Zoological Society of London.

A hearty congratulations to Sir Pat Bateson, Emeritus Professor of Ethology on being awarded the ZSL Medal for 2014. This makes it two years in a row, since last year Pat - as President of ZSL - presented the 2013 Frink Medal to Professor Michael Akam. Pat is the eighth member of the Department to be awarded the medal since its foundation in 1973.



# James Arthur Ramsay (1909-1988): pioneer of comparative physiology

Arthur Ramsay revolutionised the study of comparative physiology by showing how tiny organisms could be rigorously studied by experimental means. Many alumni will recall being taught by him how to pull glass microelectrodes and how to sharpen microneedles, and may recall watching him pacing around during practical classes practicing his fingering on a pencil, which was standing in for his bagpipe chanter. Read more about him in an article written by Adrian Friday, former lecturer and Curator of Vertebrates (1972-2006).



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Photo credit: National Portrait Gallery

#### President's Medal awarded to Zoology alumnus



Warm congratulations to Ian Harvey (King's 1969), who is the Head of Biology at Hills Road Sixth Form College in Cambridge, on his being awarded the President's Medal by the Royal Society of Biology for his contribution to biology locally and nationally. He was also named in 2014 as one of the top 100 practising scientists by the Science Council.

The photograph shows him receiving his medal from the President, Professor Dame Jean Thomas.

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#### Zoology alumnus wins biology teaching award

Hearty congratulations to Paul Weeks (Emmanuel 1987) from Oxford High School, who has won the Royal Society of Biology's 2015 Secondary School Biology Teacher of the year award.

Photo credit: Royal Society of Biology



#### Claire Fenuik wins two conservation prizes



Claire Fenuik, a PhD student in Andrew Balmford's group was awarded two prizes by the Society for Conservation Biology at the 2015 International Conference on Conservation Biology in Montpellier: the European Young Nature Conservationist 2015 award, and an honourable mention prize for her presentation at the conference.

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#### Book review: Principles of Neural Design



Simon Laughlin's book (co-authored with Peter Sterling) *Principles of Neural Design* (MIT Press) had its British launch in July 2015. According to Professor David Attwell (UCL): "Time, space, energy and information: these are the key themes of this fascinating book, which takes the spirit of the Feynman Lectures on Physics and applies it to explain how the brain has been designed, by evolution, to process information efficiently. Unique insights, recounted in the author's characteristically appealing style, are to be found on every page."

#### Read more

#### Book review: What works in Conservation



This book provides an assessment of the effectiveness of 648 conservation interventions, based on scientific evidence relevant to the practical conservation of amphibians, birds and farmed ecosystems. The assessments have been made by international expert panels, following a transparent process designed in the Zoology Department. The volume is published in partnership with the Conservation Evidence project and is fully linked to the project's website, where more detailed evidence and references can be freely accessed.

#### Zoology hosts first alumni events

Following Professor Nick Davies' lecture on 26 September, 50 people joined Zoology staff for a drinks reception in the Elementary Lab.

To keep in touch and for information on future events, please contact Rachel French.

To find out about upcoming events for Zoology alumni, news from the Department and in particular to see the recent publications please see our <u>Alumni webpage</u>.

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