

June 2016

## Zoology alumni

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Dear alumni,

Welcome to the 2016 summer newsletter, the last before the 150th Anniversary Weekend (September 23rd – 26th). We hope that as many of you as possible will join with us to celebrate the past, present and future of the Department of Zoology.

A detailed programme of events is provided [here](#). You are welcome to choose to come to as many of these events as you wish. All the activities on Friday and on Sunday morning are free, but some do require booking. Tickets for the Mike Gunton talk are available [here](#) as part of the Alumni Saturday pass or for £15. There are 50 tickets reserved for the David Attenborough event for Zoology alumni and their guests. These are available [here](#). Please note that all Alumni Festival tickets are already sold out.

We have designed the weekend so that you can share with us the thrills of past discoveries and the excitements of discoveries to come; scrutinize current labs, the museum stores, our rare book collection, and the art on display; be entertained by a circus performer, a garden designer and zoologists trying not to repeat themselves; and take part in a recreation of the Part II Zoology “Spots Test” of examinations gone by.

The first event of the anniversary year, a lecture on April 28th by Professor Jim Secord on “Raising the whale: defining zoology at Cambridge” was very well attended and was enjoyed by all.

If you are interested in learning a little more about the history of the Department, you might like to read the short (22 pp) booklet *Professors and Portraits*, which contains brief biographical sketches of the nine Professors of Zoology since 1866 and the artists who portrayed them. If you would like a copy posted to you, please email Rachel French on [rf394@cam.ac.uk](mailto:rf394@cam.ac.uk).

We look forward to meeting lots of you over the course of the Anniversary weekend in September.

The 150th celebrations do not end after the anniversary weekend. We are planning a photographic competition, open to all alumni and staff, focused on a zoology subject [animal, part of an animal etc], with a deadline in October, and the winning photographs will feature in a calendar for 2017. So, get those cameras in action over the summer! Further details will be announced later.

Best wishes

William Foster  
Director of Alumni Relations,  
Teaching Staff: 1976-present



# Join us to celebrate the past, present and future of the Department of Zoology

We have designed an exciting programme of events and activities that we trust will appeal to alumni of all ages and their guests. Our best-known alumnus, Sir David Attenborough, will be in conversation with alumna Dame Frances Ashcroft at 4pm on Saturday 24 September and this is preceded at 3pm by a presentation of natural history film clips by Mike Gunton, who has been Sir David's producer on many of his best known programmes. Afterwards, Sir David Attenborough's talk will be followed by a Champagne Reception at 5pm with Sir David in the Beagle Café, in the newly refurbished Museum.

There is a full programme of events, from 11.00am on Friday to 1.00pm on Sunday, including Open Labs, tours of the new Museum stores, Art works, and Rare Books; a conversation with one of Britain's leading garden designers; lectures on developmental biology and behavioural ecology; films and short talks by research zoologists; and family-oriented events and quizzes. We are really looking forward to seeing alumni get together and we can't wait to speak to as many of you as possible over the weekend.

[Read more](#)



## Close, but no cigar

Invasive rats are a major threat to the biodiversity of island faunas worldwide. One of the largest rat eradication projects ever attempted was targeted on 43km<sup>2</sup> Henderson Island in the Pitcairn group, in 2011. After massive immediate mortality, the rat numbers on this South Pacific island recovered in 2-3 years.

Recent work by Bill Amos and Michael Brooke analyzed the genetic diversity of the rat populations before and after the poisoning, and showed that the population passed through a bottleneck of only 60-80 individuals. This is the first time that anyone has estimated how close a project of this sort was to success.

[Read more](#)



## Meerkats bulk up to stay on top

In meerkat societies, it is size that usually determines who gets to become dominant and monopolize reproduction in the group. Recent field experimental work by a team led by Tim Clutton-Brock has shown that individual females keep a close eye on the weight of those nearest to them in the breeding queue. When the younger member of a pair of sisters was given extra food, their increased growth stimulated their elder sister to eat more and stay ahead of their rival.

It is clear from this and other evidence that for meerkats growth is a competitive game: the dominants continually monitor their weight relative to that of their potential usurpers.

[Read more](#)



## Cleanliness is next to Reddishness

Zebra finches, like many animals, use red to attract mates: females prefer males with redder beaks. But what is so special about redness?

Recent research from a team led by Nick Mundy shows that genes that enable the birds to convert yellow dietary pigments to red belong to a wider family of genes that also play an important role in detoxification. This suggests that by choosing a male with a redder beak, a female might also be choosing an individual that is better at cleansing harmful substances from its body.

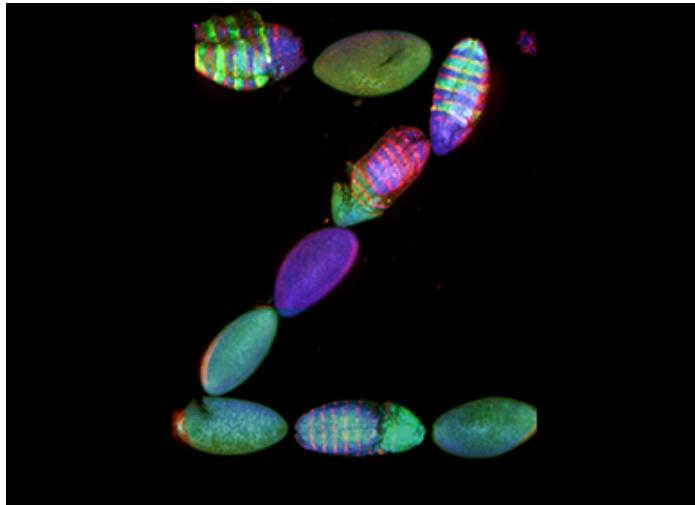
[Read more](#)



## Did our limbs evolve from the gills of sharks?

Recent research, led by Andrew Gillis, shows that human/mammalian limbs share a genetic programme with the gills of cartilaginous fishes such as sharks and skates. This supports a 138-old theory that limbs might have evolved from gills, which has been widely discredited because of a lack of fossil evidence. The latest research indicates that a particular gene performs similar functions in the development of human limbs and of the branchial rays of skate embryos.

[Read more](#)



## Imaging competition in second-year student practical class

Students were invited to take part in an imaging competition in the Part 1B Cell & Developmental Biology Drosophila Embryology practical, run by Tim Weil and Matthias Landgraf, and ably assisted by the Elementary Laboratory Technicians, Jacek Zalewski, Tracy Brazier and Daniel Green.

There were many ways to succeed: prizes were awarded for Best Artistic Image, Best Scientific Image, Best Caption, and Best Comedy Image. Shown here is a series of Drosophila embryos labeled for polarity genes, which was joint winner in the Best Artistic Image.

[Read more](#)

**"There are few things more important in the world today than what you are doing here."**

On April 6th 2016, Sir David Attenborough abseiled down the green wall in the David Attenborough Building, and with these words, which are now inscribed on the walls of the atrium, he spoke of his pride that this particular building should be named after him. In addition to the Cambridge Conservation Initiative, a new hub for global conservation, the building also houses the University Museum of Zoology and research laboratories of the Department of Zoology.

[Read more](#)



## Dr Janet Harker ScD (1927–2016)

We are sorry to report the death of Janet Harker on May 5th 2016, at the age of 89. She was known for her research on insects, in particular the ecology and physiology of mayflies, which were her passion, and on circadian rhythms, using cockroaches as a model system. She was a member of the Teaching Staff from 1959 until her retirement in 1992, and was the first person to hold the post of Deputy Head of Department (Teaching).

She will be remembered by generations of zoology students, not only for her clear and patient explication of the mysteries of the insect endocrine system, but also for her calmness, her observant sense of humour, and her modest yet stylish demeanour. As the only female member of staff during most of this period, she was of enormous importance as an inspiration for the large numbers of women students studying biology, both in Girton College and in the Department of Zoology.



# Edgar Turner is awarded the John Spedan Lewis Medal of the Linnean Society

Congratulations to Edgar Turner, who has been awarded the John Spedan Lewis Medal of the Linnean Society. Edgar is the second winner of the medal, which is awarded to an individual who "is making a significant and innovative contribution to conservation, particularly in the field of either ornithology, entomology or horticulture, in the United Kingdom". He was presented with the medal by the Society's President, Paul Brakefield, Director of the University Museum of Zoology, (see photograph) at the Anniversary Meeting of the Society in May 2016.



# Zoological Society of London's Thomas Henry Huxley and Marsh Prize is awarded to David Labonte

We congratulate David Labonte on being awarded the ZSL's Thomas Henry Huxley and Marsh Prize for 2015. The prize is awarded annually for original work submitted as a doctoral thesis by a student in a UK university: this is the seventh time a student from the department has won the prize since its inauguration in 1995. David was supervised by Walter Federle. His thesis, "Biomechanics of controllable attachment in insects", investigates how insects stick but don't get stuck.



# Charles Goodhart: a Twentieth Century life

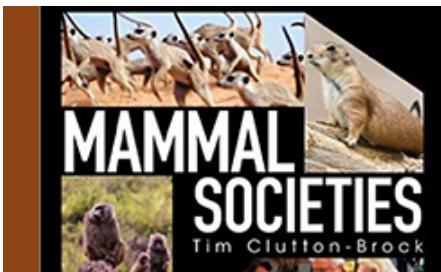
Charles Goodhart was a member of the teaching staff from 1951 until his retirement, as a University Lecturer and Curator of Invertebrates, in 1986. He was a distinguished and distinctive element within the University ecosystem throughout this period. Many alumni will remember his forceful lecturing style (he was once given 50 out of 5 for audibility in a student questionnaire) and his bracing supervisions, which had an alarming tendency to swerve off-piste into the unknown. A rather smaller cohort will also remember reading his 1964 article in *New Scientist* on "A biological view of toplessness".



Read more about him in the article by Adrian Friday, a fellow Curator in the Museum during the latter part of Charles's career.

[Read more](#)





### **Book review: *Mammal Societies***

Tim Clutton-Brock's recently published *Mammal Societies* provides the first ever synthesis of research, analyzed in an ecological and evolutionary context, on the fascinating range of social behaviour in mammals, ranging from humans that kill each other in battle to elephants that help each other to give birth.

The book provides a unique insight into the principles that underlie the complex social behaviour of the animal class to which we belong.

[Read more](#)



### **Book review: *Restless Creatures***

Matt Wilkinson's new book, *Restless Creatures: The Story of Life in Ten Movements*, traces the four-billion-year history of locomotion, from the first stirrings of bacteria to Olympic athletes. It argues that, while the need to move around is often taken for granted, natural selection for effective motion has in fact dominated the evolution of life on Earth. From brains and backbones to fins and flowers, little in life makes sense unless in the light of movement.

[Read more](#)



### **Book review: *Professors and Portraits***

This booklet, which was conceived and written by William Foster and Paula McPhee, provides vignettes of the nine holders of the chair of Zoology (1866 – 2016) and the artists who were chosen to portray them. All the artworks are on permanent display in the Balfour Library. Some of the portraits will be featured in the Artists in Zoology tour during the 150th Anniversary weekend.

This portrait is of Malcolm Burrows, the eighth Professor of Zoology (1996 – 2010), by Tom Wood, who was born in Dar es Salaam, but is currently based in Batley. To obtain your own free copy of *Professors and Portraits*, please [email Rachel](mailto:rachel).



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