Volume 3 issue 1 michaelmas term 2003

DEPARTMENT CHANGES

PROFESSOR ROBERTS RETIRES
Professor Barry Roberts retired in September 2003 after a 10 year-period as the Chair of Zoology and Comparative Anatomy. His arrival in the Department in 1993 heralded a period of profound change and development. He facilitated and encouraged excellence in research, in part through his strategic approach to the hiring of new staff that set the stage for the variety of research approaches currently in use. He modernised the curriculum and structured the training of postgraduates while streamlining the system of administration. In particular, he campaigned long and hard for an improvement in our infrastructure and facilities and this effort is now coming to fruition with the development of the new laboratories on the top floor of the Zoology Building. His legacy will remain with us and we are very grateful for the commitment he showed to the development of the Department during his tenure as Chair. We wish him immensely well in his new research position in the Department of Cellular and Molecular Pharmacology in the Chicago Medical School.

PROFESSOR HOLLAND
In October, University Council ratified the promotion of Dr Celia Holland (1980) from Senior Lecturer to Associate Professor – only the second woman at this level in the natural sciences. Our heartiest congratulations to Celia on this well-deserved promotion.

PROVOST’S TEACHING AWARD
Nicola Marples was the only Scientist among the four recipients of this prestigious award in 2002. Students described her as “absolutely superb and inspirational” and “fun and novel in her teaching” while colleagues commented “she is an inspirational, innovative teacher who has the rare ability of communicating complex ideas about science in an engaging and informative manner…” . Well done, Nicola!

CHANGE OF HEADSHIP
Julian Reynolds completed his 3-year term as Head in August, 2003, and in his place Celia Holland was unanimously elected, and we wish her the best of luck.

The occasion was marked by one of those Zoology parties on 22 August - wonderful food provided by staff and students, and great wine and beer!

In a tribute to Julian, Celia cited among his achievements running an Erasmus network linking 12 countries; organising international conferences in Dublin, Poitiers (France) and Kilkenny; carrying through the first Departmental Review shortly after he took over, and overseeing the appointment of four new academic staff and a secretary.

Julian now has a sabbatical term which will be spent at a crayfish meeting in Norway, as a visiting research worker at the Marine Institute Newport (formerly the Salmon Research Agency), and as Visiting Professor in Ecology in Poitiers.

IMPORTANT SFI AWARD TO ZOOLOGY
Paula Murphy has been awarded a 500,000 Euro SFI Investigator Programme Grant for 4 years for research into development of the vertebrate limb and facial region. This represents an important and exciting new research direction for the department. Dr. Murphy is currently forming her team and these include Gareth Brady from UCD, who has been appointed research assistant; and Victor Vendrell, a postdoctoral researcher in the University of Hamburg. Patrick Frankel (Gold Medalist 2003) has returned to work with Paula with an IRCSET scholarship.

AukTalk Nos. 1 and 2 provided a great stimulus for renewing contacts with many graduates, and we welcome your letters and emails on what you’re doing now.
Barry Roberts and Paula Murphy

THE 2003 GRADUATING CLASS

Congratulations to the 23 zoologists who presented their research projects in April at the Research Day mini-conference in the Auk Room, and successfully passed their Moderatorship exams in May: most will graduate in the November 2003 Commencements. They are:

Maeve Boylan, Barry Brogan, Tanya Constable, Patrick Frankel, Ciara Grace, Grainne Hanna, Fiona Hogan, Mary Hurley, Gillian Keating, Sarah Kenny, Brian Kirwan, Patrick Kirwan, Joanne Leslie, Anna Logan, Suzanne Miller, Colin Minto, Emma Moran, Geraldine Murphy, Sue Paffrath, Khara Shine, Lynsey Stuart, Sarah Watson. (See photo back page).

MORE HIGHER DEGREES

In 2003, PhD theses were successfully defended by: Andréanne Demers, Louise Doyle (1997), Elaine O’Mahoney and Graham McCulloch, and MScs by Marion Barrett (2000) and Paul Ivory (1999). We wish them very successful careers.

PASSING THROUGH...

Among those who paid flying visits to the Department, were Emmett Jackson (2001), Aidan Macnamara (2002), and Luke Kenny (2002), all back for Erna Calis’s (2002) wedding in June.

STAYING ON ...

Since 1996, 18 graduates have stayed on or returned to pursue graduate studies in the department. This year, we welcome back Paddy Frankel (2003) to work with Paula Murphy, and Philip Duggan (2001) with John Rochford.

PRIZES IN ZOOLOGY

This year, the J.B. Gatenby Prize for the best practical work in the Junior Sophister Year was won by Luke Saunders, and the E.A. Collen Prize for the highest-ranked Mod. Student staying on to do postgraduate work in College was awarded to Patrick Frankel.

Both Paddy and Colin Minto (a prize-winner last year) were nominated for gold medals for their outstanding performances in the Moderatorship exams. Our congratulations to them all.

RESEARCH SEMINARS

All are welcome to our Departmental Seminars, held on Wednesdays at 1pm in the Auk Room, and the Postgraduate Seminars on Thursdays at 4pm. Both are listed on our web page www.tcd.ie/zoology/

Here are this Term’s Research Seminars:

15th October Dr Ferdia Marnell (National Parks and Wildlife) “Otters, toads and micro-snails - species conservation through the Habitats Directive”

22nd October Dr Mike Elliott (Institute of Estuarine & Coastal Studies, University of Hull) “Man, estuaries and coasts: the role of science in management”

29th October Dr Robbie McDonald (Queen’s University Belfast) “Conservation biology of weasels and stoats in Britain”

5th November Dr Carmel Hensey (Department of Pharmacology, UCD) “Development of the Xenopus pronephric system - a role for the BMP antagonist Gremlin”

12th November Dr Brendan Kennedy (Conway Institute of Biomolecular and Biomedical Research, UCD) To be advised.

19th November Dr Andrew Bourke (Zoological Society of London) “Social behaviour of ants and bumble bees”

26th November Dr Elvira de Eyto (Marine Research Institute, Co. Mayo) “The impact of aquaculture on the immune response genes of salmonids”

3rd December Prof. Paddy Cunningham (Department of Genetics, TCD) “The North African screw-worm eradication program”
FRANK JEAL’S CORNER
Frank maintains contact with legions of graduates around the world, but finds time for a spot of relaxation at home. The photo shows Pat Boaden (QUB) and Frank in the Slip Inn (Portaferry) during an off duty moment on the Marine Field Trip 2003.

NEWS FROM THE MUSEUM
Julian Reynolds and Martyn Linnie represented the Museum’s interests in a workshop at the Royal Irish Academy organised by BioCASE, a consortium of museum collections in Europe seeking to find ways to exchange catalogue information.

VIEWPOINT-
GREAT ZOOLOGISTS – A THING OF THE PAST?
The late 18th and 19th centuries were probably the golden age for zoologists. Driven by world exploration and intense debate about the origins of the world and its diverse inhabitants, learned institutions and great museums flourished.

A Trinity graduate, the poet and dramatist Oliver Goldsmith was in part responsible. His 8-volume "History of the earth, or Animated Nature" (1774), has variously been described as ‘hackwork’ and ‘his most substantial literary legacy’. Written in Goldsmith’s graceful and readable style, it anticipates the Victorian empathy with animal ‘feelings’, which made it hugely popular - it ran to 20 editions in the next hundred years.

An almost forgotten Irish zoologist was Nicholas Vigors, a founder of the Zoological Society of London. Born in Carlow in 1785, he went to Trinity College (Oxford, not Dublin) in 1803, finally graduating in 1818! He threw himself wholeheartedly into the study of zoology, especially birds and insects, and made extensive collections. Vigors assisted Stamford Raffles (of Singapore fame) in establishing the Zoological Society, and he presented his collections to that body. He was Secretary of the Society, until 1833, and during that period Thomas Huxley was President, Charles Darwin was elected a Fellow, and both the London and Dublin Zoos opened.

Vigors wrote some 40 papers, mostly on ornithology, and encouraged Audubon (1785-1851), the famous self-taught bird illustrator, when he visited Edinburgh and London. Audubon distinguished himself from more academic illustrators of the time, by shooting his own specimens and drawing them freshly dead, rather than stuffed.

Trinity’s Museum was founded in 1776 (largely to house Captain Cook’s Polynesian collections) and was very popular in the early 1800s, when it was based in Regents’ House, over Front Gate. Many of its acquisitions are nineteenth century, including valuable mammal and insect collections. However, about 50 years ago envious eyes were directed at the ‘wasted space’ in the Museum purpose-built in 1874, and many of the collections were dispersed or destroyed. Since then new collections have been added and the whole catalogued, and now the space is to be returned to the Department.

Today, more than a million animals have been discovered and named – but there are still many discoveries to be made. Only last year, a third species of elephant was identified! Trinity zoologists have recently found new (undescribed) species or races of birds and mammals in Sulawesi, and are routinely using genetic tools to determine where relationships begin and end. The origins and specific identity of the Irish fauna is a case in point.

However, the future of systematic zoology is under threat. Large museums in Europe have been shedding staff for several decades, and many of their world-famous expert rooms are empty. Politicians today pay only lip-service to the importance of biodiversity, perhaps concluding that the future of much non-human life on the globe is dispensable. As human populations continue to increase, currently diverting over 50% of global production to their own use, other species are facing extinction
unless needed. But cattle, maize and penicillin, although important, are only a tiny part of the global biota. Complex biological and ecological systems need detailed understanding of their components, as many ecological disasters, costly mismanagement and simplistic biocontrol measures have shown. Political railings about swans and snails holding up the Irish roads programme are not good enough.

If we are to change Irish public attitudes, we need to remember the zoological achievements of the nineteenth century and rekindle some of its driving enthusiasm and reforming influence. The strong output of adventurous zoology graduates, travelling and working, often as volunteers, from the Antarctic to Australia and South-East Asia, are bringing back technical expertise and rational ideas about the world, in which the place of humans need not always be at the expense of other species.

Julian Reynolds

MENAGERIE – NEWS ROUNUP FROM THE RESEARCH GROUPS

Freshwater Biology – Julian Reynolds

In 2003 the EU Specialist Network ‘CRAYNET’ became active, and as one of its initiators, Julian organised its first thematic meeting (in Kilkenny), with the help of Marina Pearson and Andréanne Demers.

Andréanne completed and successfully defended her PhD on water quality requirements of white-clawed crayfish, *Austropotamobius pallipes* in Ireland (examined by Professor Souty-Grosset from Poitiers) and has since been compiling distributional data on Irish crayfish for a forthcoming European atlas. She will take up a post-doctoral position in Poitiers in December.

Maria Wickenberg investigated distribution and bioindicator status of woodlice in grasslands, during which she re-found a species believed extinct in Ireland.

Recent publications include:


Ken Irvine

Graham McCulloch completed his PhD and was successful in his viva, turning some minor corrections around in a few days. Returning to his spiritual home in December with a range of possibilities opening up before him, he is truly in the pink. Graham hopes to continue his link with the Department and has applied for EU funding in partnership with, among others, the London based International Institute of Environmental Development and our long-term research partner, Koen Martens now Prof at the University of Amsterdam, for a project on improved integration of biological and socioeconomic techniques for the protection of scattered wetlands in Southern Africa. This follows Graham’s publication in *Oryx* (below). Recent successes on the publication front were also achieved by Ian Donohue (three this year so far and two further in review-well done Ian) on his work in Lake Tanganyika and former research group members Elvira de Eyto and Jonathan White. We are told more from all three are in the pipeline. Rosanna Caroni, now back in Italy has also been writing up some of her very interesting work on the impact of acidification on plankton communities.

We welcome Constanze O'Toole as a post-doc on a 6th FP project REBECCA, looking at the link between chemical and ecological status of lakes. Constanze has been helping Ken complete all those tedious bits of a report on use of mathematical models in the implementation of the Water Framework Directive, and will no doubt be looking forward to some more interesting and challenging endeavours.

Work by the rest of the group continues apace and we all look forward to new opportunities for improvements in the infrastructure of the department, so long promised. Ken won't miss his office and looks forward to a more pleasant vista, already decked out in the finest greenery.
Examples of recent papers include


Marine Biology – Jim Wilson

A busy year for meetings - Jim was co-organiser with Ken Irvine of the "Maritime and Coastal issues" sessions at DipCon O3 UCD, 18-22 August 2003, at which he also presented a talk and chaired a session.

Jim also co-organised and presented at the SPS-22 "Estuarine ecosystem properties through a network approach" session at ERF03 in Seattle, 14-19 Sept 2003. (see www.erf.org for info) He also attended the Editorial Board meeting for "Estuarine Coastal and Shelf Science" in Seattle, and the official launch of the new RV Celtic Explorer in Galway.

Frank Jeal and Conor Nolan

A group of elasmobranchiasts from Frank’s team attended the Symposium on Elasmobranch Fishes: Managing for Sustainable Use and Biodiversity Conservation. 23rd NAFO Scientific Sessions, held last September at Santiago de Compostela, Galicia, Spain. Accompanying the Symposium Organiser Conor Nolan were Michael Gallagher, Paul Ivory, Erna Calis, Emmett Jackson, and Frank Jeal.

Six presentations by our group (four delivered papers, two posters) dealt with the demography of skates, rays and chimaeras. The photo taken at the conference shows all delegates except Michael Gallagher. (L to R ) Frank, Conor, Erna, Emmett, Paul.

Evolutionary Parasitology – Celia Holland

Celia Holland has been invited to serve for a period of four years as a member of the World Health Organisation Expert Advisory Panel on Parasitic Diseases.

Celia was an invited expert and co-rapporteur at an informal WHO consultation in Geneva in May 2002. The consultation focused upon the use of anthelmintic drugs against schistosomiasis in pregnant women and soil-transmitted helminths in children under the age of two years.


Celia also attended the International Congress for Parasitology in Vancouver in August 2002 with Elaine O’Mahoney and Ciaran Byrne, who presented papers and a poster.

Marian Barrett (2000) was awarded her MSc in April 2003, on “Migration of Toxocara canis in the Mongolian gerbil”.

Elaine O’Mahoney was awarded her PhD in June 2003 - Strain differences in Pomphorhynchus laevis (Acanthocephala), an ecological, morphological and molecular approach”

Examples of recent papers include


Mark Brown
The Evolutionary Parasitology group is gathering speed. Two 2003 graduates, Paddy Kirwan and Anna Logan, completed the first projects in the Department to use stinging insects since Dr John Breen’s departure (over two decades ago) and have now gone on to bigger things (given the size of the parasites they studied, this was perhaps unavoidable). This year six under-graduates will be conducting Honours projects with Celia and Mark, so we eagerly anticipate moving into the new, larger Parasitology lab, part of the reconstruction of the 2nd floor.

Mark has been awarded an HEA grant of 280 000 Euro as part of the North South Programme for Collaborative Research. In collaboration with Rob Paxton at Queen’s, Belfast, this project will examine the conservation genetics of Irish bees with the aim of establishing a database on the distribution and abundance of these important and diverse animals (we have 91 species in Ireland). Dr Una Bradley, late of the Botany Department TCD, has joined Zoology and will be working as a post-doctoral research fellow on the conservation genetics of bees. Ultimately, we hope to be able to guide the government in managing and protecting these essential pollinators.

Examples of recent papers include

Behavioural Ecology
Nicola Marples
This year we have opened two exciting new fields of research and consolidated our work on zebra nutrition which began last year. One of these new areas is a study of the effects which zoo visitors have on the behaviour and welfare of the animals, while the other is looking at the responses of birds to enriched enclosures and novelty, aiming to improve our understanding of the effects of enrichments. This work will not only use zoo animals, including the parrots, but will be carried out on aviary held wild birds including blue tits, and wild living birds including robins. We are very grateful indeed to Dublin Zoo for sponsoring a set of 12 aviaries designed for this purpose. At present this work is being carried out by Nicola Marples and short term project students, but it is hoped to apply for a post graduate project to start in April 2004.

The study of zebra nutrition is also providing many interesting and publishable results (see publication below). The work includes choice tests on different grass species, allowing us to identify those with the best nutritional balance for the zebra, and also species which the zebra won’t eat, so these can used for aesthetic enhancement of the plains exhibit.

In association with Operation Wallacea, we have carried out a study on the island biogeography of a set of islands near Sulawesi. Over the past five years we have surveyed the birds on 7 islands in the region ranging in size and distance from the mainland. We have also carried out extensive trapping projects allowing detailed plumage description and measurements to be taken of many of the species. During this time we have discovered a new subspecies of red backed thrush (Zoothera erythronota kabaena) found in 1999 (see publication below) and this year a new subspecies of pale bellied white eye (Zosterops consorbensis), on which DNA work will be carried out shortly to confirm its taxonomic status. We have increasingly extensive data sets on morphometrics, song libraries and photographic records. This work is ongoing and we hope to return to Sulawesi to survey two of the more remote islands in 2005.


CONGRATULATIONS TO…
- Nicola Marples and Dave Kelly (PhD 2001) on their engagement (no puns about bird ringing, please).

WEDDING BELLS
Since the last AukTalk the following ex-student marriages have taken place, most faithfully recorded by Frank.

- Sept 2002 Niall McDonough (1993) to Oonagh McMeel
- March 2003 Dermot Clarke (1993) to Abi Rowe
- Easter 2003 Malachy Scott (1990) to Siobhan Gaynor
- June 2003 Erna Calis (2002) to Matthew King
- August 2003 Colin Lawton (1995) to Deirdre Coughlan
- August 2003 Deirdra Cox (1992) to Philip Nolan
- Sept 2003 Noreen McLaughlin (1998) to Karl Grant

Let us know about your big occasion!

FEEDBACK FROM GRADUATES

Maeve Boylan (2003) spent the summer in Calcutta as a voluntary teaching assistant with ‘Suas’, a newly-formed development group based in TCD. They hope to have 60 volunteers next year.


Karen McCrann (2002) was at the official launch of the RV Celtic Explorer in Galway; she is now working with Betty Gosling in GMIT.

Tanya Strevens (2002) is starting a PhD at the Institute of Conservation Biology and Law, Department of Biological Sciences, University of Wollongong, NSW 2522, Australia – the University voted tops in research in Australia. Tanya writes:

“It’s a fantastic place to be. The University Biology Department is really big, but friendly. The postgrad scene is very lively and the work ethic is most impressive! For now I’m just thinking about a few broad issues, ranging from predation, dispersal, plant-animal interactions and edge effects. I’m living just 15 minute cycle from the Uni, and near the Botanic Gardens, in an apartment on the side of the Illawarra Escarpment, a stunning backdrop to Wollongong and the fabulous Tasman Sea. Downside? we recently had 6 days of continuous downpour where it rained 12 inches.

Eimear Walsh (2001) has just completed a MSc in Wildlife Management and conservation in Reading. Emmet Jackson (2001) and Mary Toomey (2001) also completed the same course with distinction.

Marian Barrett (2000) works as a histotechnologist in the Central Veterinary Research Laboratory in Abbotstown as part of a UCD research team working on tuberculosis in badgers.


Ben Phalan (2000) has been Zoological Research Assistant at the British Antarctic Survey since 2001. You can read his regular fascinating articles in “Wild Ireand” magazine, which have stimulated much interest.

Aine O Connor (PhD, 2000) is leaving her post in the Environmental Science Unit, National University of Ireland, Galway, to take up a research post in National Parks and Wildlife, where she will join other Trinity zoologists including Ciaran O’Keeffe (PhD 1986) and Ferdia Marnell (PhD 1996) (see AukTalk 1,2).
Joana Doyle (1999) writes: “After graduating from Trinity in 1999, I worked as a volunteer with Operation Wallacea on the marine conservation project in Hoga. This is where I became fascinated with marine life and began working towards a career in this field. I spent 18 months travelling, working and diving throughout South-east Asia and Australia. In September 2001 I began an MSc in Marine Environmental Protection in the University of Wales Bangor, graduating with distinction in 2003. During this time I specialised in coral reefs and their management and carried out fieldwork in Rodrigues, Indian Ocean. I completed my dissertation in November and worked as the Project Scientist for a marine conservation project with Coral Cay Conservation based in Southern Leyte, the Philippines for 6 months. I am currently working with Martin Robinson in the marine labs in Trinity and also as an assistant editor for PERSGA, Saudia Arabia”.

Helen Skerrett (1995) is starting a new job in September 2003 as a postdoctoral fellow in Vasogen, a Canadian biotechnology company based in the Royal College of Surgeons. The research will involve cell culture and immunomodulation therapies.


“I have fond memories of Dr Blackith in various roles from the time I first heard him speak in 1976 to my last meeting with him at the commencements ceremony in July 1987. I understand he enjoyed an active retirement and a continued interest in entomology. I graduated with a degree in biochemistry but thoroughly enjoyed the JF and SF zoology component. Frank Jeal’s lectures on the evolution of the vertebrates were particularly outstanding. Derek Goodhue was my undergraduate tutor. Dr Blackith’s contribution to my formal education was his lectures on FORTRAN programming, which he enlivened with personal anecdotes such as his description of the days and nights he spent multiplying matrices by hand. Gerald E. Smyth, Tagu-cho 466-144, Ushiku City, Ibaraki 300-1236, Japan

Brian West (1965) is Professor and Director of Anatomic Pathology at the New York University Medical Center, Department of Pathology, 560 First Avenue, New York, NY. He gets back to Ireland regularly, and remembers with particular fondness the Burrishoole and former Salmon Management station by Lough Feeagh, Mayo.

Julian Reynolds (1964) is retiring in September 2004, slightly worn but still in working order, and is open to offers. His cv lists hundreds of articles on conservation biology, particularly crayfish, eels and turloughs. He has sung in 50 concerts, planted 100 trees, and among his odder achievements was providing Latin pronunciations for animal and plant names, for a CD edition of the world’s most famous natural history book, ‘The Natural History of Selborne’

Note from Bob McMahon:
Starting in September 2003 I have accepted the position of Dean of the Honors College at my present institution, The University of Texas at Arlington. New phone number: 817-272-7215 New postal address: Honors College 100 College Hall, Box 19222, The University of Texas at Arlington Arlington, Texas 76019

New graduates 2003

Editor: Julian Reynolds Contributions for next issue to ‘Auktalk’, Zoology Department, Trinity College, Dublin 2, or e-mail fimolony@tcd.ie. 
http://www.tcd.ie/Zoology/