RESEARCH SCHOOL OF BIOLOGY

THE AUSTRALIAN NATIONAL UNIVERSITY

NEWSLETTER

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NEWS

RSB RESTRUCTURE – NEW HEADS

The Vice Chancellor has approved the establishment of the three new RSB Divisions (Biomedical Science & Biochemistry **(BSB)**; Evolution Ecology & Genetics **(EEG)**; and Plant Science **(PS)**), as well as the Biology Teaching and Learning Centre.
The following people have been appointed as Heads of the Divisions: Stefan Bröer (BSB), Bill Foley (EEG), Murray Badger (PS). Barbara van Leeuwen is to Head the Biology Teaching and Learning Centre and Dave Rowell is to be the deputy-Head. Congratulations and thanks to all. The new structure will take effect from 1 October, 2009.

OPENING OF THE WES WHITTEN BUILDING

Vice-Chancellor Ian Chubb and Wes Whitten (Photo: Stuart Hay)

On Monday 21 September the Vice-Chancellor, Ian Chubb, opened the Wes Whitten building in the presence of Wes (aged 91) and his extended family. The building will house a range of animal species for use in the School's research and teaching. ANU Media article.

FAREWELL

After twenty years of service to RSBS, Maria Santosuosso will be closing 'Maria's café' for the last ime on Friday 25 September. Maria has run the café for 12 years, feeding countless visitors and hungry students. She frequently let students pay what they could afford rather than the full price, and leaving any leftovers at the end of the week for them to help themselves. She has been 'Mama Maria' to several foreign students, helping them to cope when they were lonely or depressed.

Maria will be missed for her kind personality, as well as her fine, home-cooked food. A certificate beside her café from her fans in Earth and Marine Sciences attests to the quality of her sausage rolls - 'The best on the ANU campus'. Others enjoyed the quality of her hearty minestrone on a cold winter's day, while still not understanding the difference between soup and minestrone! In spite of falling clientele, Maria has continued to serve her regular customers from RSBS, BoZo and Earth and Marine Sciences, who she regarded as her second family. She will be greatly missed.

Maria at her farewell, with Director Kiaran Kirk.

FUTURE PLANS

As part of the renovation and extension of the Foyer Area in Building 46, and noting the closure of Maria's Café, the School will be looking at options to include a food servery area within the foyer area.

RSB PAPER IN THE NEWS

The paper 'Females prefer to associate with males with longer intromittent organs in mosquitofish', published in Biology Letters by Andrew Kahn, Brian Mautz and Michael Jennions, led to coverage in the Sydney Morning Herald, the Brisbane Herald, and NatureNews. This work was completed while Andrew was on a Summer Scholarship. See article on Page 2.

WELCOME

Dr Gemma Hoyle joins the Nicotra lab (EEG) to begin an ARC postdoctoral fellowship examining seed and seedling ecology of alpine plants. The project involves collaboration with the Australian National Botanic Gardens. Gemma completed her PhD at UQ in 2008 and has worked on seed banking efforts in the Millenium seed bank, and seed banks in Australia and China.

A/Prof Erick Strauss, Stellenbosch University, South Africa, will spend the next few months in the Saliba Lab (BSB). Erick will investigate how a series of pantothenamides (vitamin B5 analogues) exert their antiplasmodial activity.

CONGRATULATIONS

Professor Jenny Graves (EEG) received the inaugural M.J.D. White career award in genetics at a special lecture during the AustralAsian Genetics Society meeting in Brisbane in July.

Professor Graves. (Photo: Micheline Pelletier/GAMMA)

Dr Elizabeth Murchison, a CJ Martin Fellow in Jenny Graves' laboratory currently researching the genomics of Tasmanian Devil Facial Tumour Disease at the Sanger Institute in Cambridge, received a L'Oreal Fellowship awarded to outstanding early career women scientists in the UK.

Kate Sanders (EEG), co-author with Scott Keogh, is the 2008 winner of the Slowinski Award which recognises the most outstanding paper in snake systematics published world-wide in the previous year.

Peter Kozulin, a PhD candidate in the Provis Lab (BSB), won the Best Student Oral Presentation prize at the 17th Annual Scientific Meeting of the Australian Vascular Biology Society, held at the John Curtin School of Medical Research, 10-13 September. He received a cheque for $500 for his talk entitled *Expression of anti-angiogenic factors in fetal primate macula.*

Riccardo Natoli has been awarded a PhD for his thesis T*he effects of hyperoxia on the C57δ/BlJ mouse retina.* Ric is a Research Officer in the Provis Lab (BSB).

Christina Spry, Saliba Lab (BSB), handed in her PhD thesis two weeks ago and has already started a postdoc position in the same lab.

NOTICES

HAPPY HOUR

The first RSB-wide happy hour last Friday was a great success, with people from all parts of the School attending. Next Friday (2 October) the School Happy hour will be in the Banks Building courtyard, starting at 4.30pm. All welcome.

RSB STUDENT CONFERENCE

8-9 October (all day), Manning Clark Lecture Theatres 2, 4 and 5.
PhD and MPhil students from RSB will give presentations on their research, social function to follow. The conference schedule will be circulated soon.

SEMINAR

1pm 6 October, Robertson Lecture Theatre. 'CoA Biosynthesis in the Yeast *Saccharomyces cerevisiae* Unveils the Formation of A Unique Heteromeric Decarboxylase, and New Moonlighting Activities'
Assoc. Professor Erick Strauss, Stellenbosch University, South Africa

FEMALE FISH AGREE BIGGER IS BETTER; HUMAN RESEARCH MAY BE NEXT

By RICHARD MACEY
smh.com.au
17 September 2009

SIZE may matter, Australian scientists have found.
In possibly the first study of its kind, Australian National University biologists found that female mosquito fish prefer males with large genitals.
Michael Jennions, a biology professor, said yesterday the finding had inspired him to contemplate repeating the research using humans.
"It's an area where we would like to do a study," Dr* Jennions said.
"Males seem to be obsessed with penis size and there are endless surveys in Cosmo. But when it comes to statistics, the data is lacking."
For the study, led by biology student Andrew Kahn, Dr Jennions said they chose mosquito fish, a pest in Australian rivers, because the male sex organ, or gonopodium, was "quite prominently displayed" and easy to measure. Built into a fin, "it's greatly extended, like a sword".
While there had been many studies into animal genital evolution, most focused on the mechanics of mating.
"We wanted to know if there was some pre-mating effect," Dr Jennions said. "Would females be attracted to males with larger genitalia?"
They surgically clipped the genitals of male fish. Some were shortened by a quarter, while others had as little as 1 per cent snipped off.
The professor said the process was harmless. "We had zero deaths."
Dr Jennions said mosquito fish did not have a courtship routine. "The males spend all day sneaking up behind females." Females and males naturally gathered. "You have to find someone to hang out with ... there is safety in numbers."

That's gotta hurt ... the mosquito fish's male sex organ, or gonopodium, is easy to measure. Many were given the snip and were shunned by females unless there was no competition.

The researchers put female fish in tanks with males, ranging in body size from about 16 millimetres to 24 millimetres long, that had had their genitals clipped to varying lengths. The researchers watched to see which males the females preferred.
When offered a choice of the larger males "the females preferred males with longer genitalia", Dr Jennions said. The trend was significant, "far more than you would expect by chance".
Curiously, when females were offered a choice of small males, their genital length made no difference.
"The females didn't seem to mind," Dr Jennions said, admitting he did not know why. "We need to do follow up studies."
For human studies they would probably settle for using video images of genitals. Their research appears in Biology Letters.

Andrew T. Kahn, Brian Mautz and Michael D. Jennions (image right: Professor Jennions)

Females prefer to associate with males with longer intromittent organs in mosquitofish
Biology Letters Sept 15, 2009,
doi: 10.1098/rsbl.2009.0637

PAPERS ACCEPTED

Allen, R.J.W. and Kirk, K. (2009) *Plasmodium falciparum* culture: the benefits of shaking. *Mol. Biochem. Parasitol.*

Bringans, S., Hane, J.K., Casey, T., Tan, K-C., Lipscombe, R., Solomon, P.S. & Oliver, R.P. (2009). Deep proteogenomics; high throughput gene validation by multidimensional liquid chromatography and mass spectrometry of proteins from the fungal wheat pathogen *Stagonospora nodorum*. *BMC Bioinformatic.*

Booksmythe, I., Milner, R., Jennions, M., Backwell, P. (2009). How do weaponless male fiddler crabs avoid aggression? *Behavioural Ecology and Sociobiology*

Booksmythe, I., Jennions, M., Backwell, P.. (2009). Investigating the 'dear enemy' phenomenon in the territory defence of the fiddler crab, *Uca mjoebergi*. *Animal Behaviour.*

Grunewald, W., van Noorden, G.E., van Isterdael, G., Beeckman, T., Gheysen, G. and Mathesius, U. (2009). Manipulation of auxin transport in plant roots during *Rhizobium* symbiosis and nematode parasitism. *Plant Cell.*

Rosli, Y., Maddess, T., Dawel, A., and James, A.C. (2009). Dichoptic evoked potentials using multiple frequency doubling illusion stimuli. *Clinical Neurophys.*

Sanders, K.L., Lee, M.S.Y., Leijs, R., Foster, R., Keogh. J.S. (2008). Molecular phylogeny and divergence dates for Australasian elapids and sea snakes (Hydrophiinae): Evidence from seven genes for rapid evolutionary radiations. *Journal of Evolutionary Biology.*

Tan, Jonathan K.H., O'Neill Helen C. (2009) Investigation of murine spleen as a niche for hematopoiesis. *Transplantation.*

van de Pol, M., Brouwer, L., Ens, B.J., Oosterbeek, K., Tinbergen, J.M. (2009). Fluctuating selection and the maintenance of individual and sex-specific diet specialization in free-living oystercatchers. *Evolution.*

van de Pol, M., Vindenes, Y., Sæther, B.E., Engen, S., Ens, B.J., Oosterbeek, K., Tinbergen, J.M. (2009). Effects of climate change and variability on population dynamics in a long-lived shorebird. *Ecology.*

van de Pol, M., Ens, B.J., Oosterbeek, K., Brouwer, L. Verhulst, S. Tinbergen, J.M., Rutten, A.L., de Jong, M. (2009). Oystercatchers' bill shapes as a proxy for diet specialization: more differentiation than meets the eye. *Ardea.*

van de Pol, M., Atkinson, P., Blew, J., Crowe, O., Delany, S., Duriez, O., Ens, B, Hälterlein, B, Hötker, H., Laursen, K., Oosterbeek, K., Petersen, A., Thorup, O., Tjørve, K., Triplet, P. & Yésou, P. (2009). A global assessment of the conservation status of the nominate subspecies of Eurasian oystercatcher (*Haematopus ostralegus ostralegus*). *International Wader Studies.*

This newsletter is distributed fortnightly by email and hard-copy, and is archived at http://biology.anu.edu.au/Newsletter
Contact Diane Whitehead to be added to the mailing list and to submit material for future issues.
Editing: Kiaran Kirk, Diane Whitehead & Sharyn Wragg. Design & layout: Sharyn Wragg. Banner image: Sharyn Wragg. Brown snake (*Pseudonaja textilis*).