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# Endpoint

OF THE AUSTRALASIAN SOCIETY FOR ECOTOXICOLOGY

## **Volume 13, Number 1**

August 2006

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## A Note from the Editor

Welcome to the first issue of Volume 13 of our Endpoint newsletter as we all get ready for the upcoming Interact Conference in Perth next month. It is shaping up to be a great conference with around 400 delegates and a wide range of topics covered to suit everyone's interests. I am told also that the social program is jammed packed with activities including a Loud Shirt Day (or happy hour anyway) and lots of opportunities to meet up with colleagues outside of the conference.

This issue contains all our regular features as well as some special feature articles and I thank members for their continued support and contributions. Also in this issue is an announcement of this year's winners of the Australian Museum Eureka Prize for Water Research. Congratulations to Graeme Batley, Stuart Simpson, Jenny Stauber and colleagues on this award which recognises their contribution to research advancing the assessment and regulation of contaminants in aquatic sediments over the past few years.

That's it from me for now. Look forward to seeing you in Perth!

Catherine King  
Editor-in-Chief  
August 2006

## ASE Sustaining Members

ASE gratefully acknowledges support from the following organisations in their sustaining membership:



## Aims of ASE

A scientific society for biologists, chemists, engineers and other environmental scientists concerned with environmental protection and management. The specific aims of the ASE are:

- to advance the science of ecotoxicology as it relates to environmental protection and management
- to promote education, research and the application of knowledge in this field for the development of ecologically acceptable principles and the practice of environmental protection and management
- to provide for the transfer and dissemination of information on these issues via workshops, conferences, the production of a periodical and other publications
- to provide a forum for communication among professionals in this field in industry, government, research and teaching organisations, for environmental protection and the benefit of the community
- to collaborate with other societies with similar purposes on a national and international basis, to further these aims.

For membership application forms and other information on ASE, see the ASE home page:

<http://www.ecotox.org.au>

## Deadlines

Endpoint is distributed to ASE members in 3 issues each year - April, August and December. The deadline for contributions falls on the Friday prior to the start of the month of the issue.

Please send all submissions to [cath.king@aad.gov.au](mailto:cath.king@aad.gov.au) for the next volume, Volume 13(2) by **24 November 2006**.

Editors - Catherine King, Fred Leusch

## Policy

### Editorial policy relating to the publication of submitted material:

The editors will use their discretion on whether to publish submitted material, wholly or in part. The aim will always be to try to avoid heavy editing of material, but material likely to be offensive to members of ASE will either be deleted without consultation with the author, or will be returned to the author for revision.

### Advertising in Endpoint

Costs for advertising are: \$300 - full page, \$180 - half page, & \$150 - quarter page (prices include GST). Material can also be inserted into Endpoint with cost available on request. The fee may be waived if we think the material will greatly benefit the readership. Short courses and conferences will still be recorded in "What's on" free of charge.

The 2006 conference, Interact – in conjunction with RACI and Clean Air Society of Australia & New Zealand, is almost upon us (I think I said that last time – it is even nearer now!). The dates are 24th – 28th September 2006 at Burswood International Resort Casino. Check the website [www.promaco.com.au/conference/2006/raci/](http://www.promaco.com.au/conference/2006/raci/) for more details.

We have three international speakers focussing on ecotoxicology (plus those in chemistry and air): Jerry Neff; Phil Rainbow; and Joe Tietge. Kevin Fransisconi (who RACI invited) is also a metals toxicologist. Bioavailability of metals was of most interest, with 5 sessions running, and Philip Rainbow is conducting an afternoon workshop (in a concurrent session) on Aquatic Ecotoxicology of Metals from Mining. Check out the program on the website for details. There are around 60 of the more than 220 abstracts directly relating to ecotoxicology – for those who have submitted abstracts and wish to amend them, the deadline for updating abstracts is 25 August. The ASE AGM on the Wednesday afternoon (27 September) between 4:20 and 5:30 pm – and remember to submit your signed nomination form if wanting to be on ASE Council by 6th September to our Secretary, Scott Wilson.

Although ASE Council has increased the number of student travel grants for Perth to 10 and the amount to \$1000 each (plus a \$50 discount!) , Rick Krassoi wasn't exactly run off his feet dealing with the rush of applicants – we only had 3 when the closing date arrived! Those three put up a sufficient case to each gain a grant, but the deadline was extended to provide more opportunity for other students. I hope that doesn't mean a very small student attendance – and so does Jacqui Levy, our Student Rep, who is coordinating student activities for Perth. Sounds like we might need to employ some of those telemarketers who ring up around tea time!

In addition to the above three, the two Honours Prize recipients, Heather Brown from UTS and Hilary Johnson from University of Wollongong, also received a travel grant each. Congratulations Heather and Hilary, who certainly deserved the position of joint winners, and thanks to the other

Honours students, who gave them a run for their money. Heather and Hilary will receive an engraved trophy each and the prize money at Interact in September. Some of the assessors' comments of their theses were, "impressive", "a joy to read", "there was not much to criticise" and "no weaknesses".

FASTS provided comment on the Federal budget in May, describing it as a "mixed bag for science and innovation". "While there are some welcome one-off initiatives and a decent increase to medical research the Government has not done anything really substantive to build our innovative capability." There was some additional funding for university research infrastructure, usually specific projects at a number of universities (primarily ANU) but also for medical schools/health sciences infrastructure at Deakin, Monash, Bond and Wollongong. There is \$3m for further development of the RQF but no money for implementation. There are additional funded places for nursing and doctor education. There is no additional funding for CSIRO and ARC as expected. FASTS have been given \$200,000 pa for 4 years to support the secretariat. There was little mention of the environment apart from \$388m for tackling illegal fishing and \$500m for the Murray Darling.

Overall I think that we are getting reasonable benefit from being a FASTS member, not least for the information flow on science issues and wider context for some of our work.

Development of the on-line payment system for membership is progressing. We were hoping to have it up and running for the renewals prior to Interact but, after we had received the MOMS (Member's Online Management System) from St Andrew's Cathedral School, a little more time was needed to road test the system before using it routinely. The School have done a great job developing a top-notch system. Once MOMS is online, we will be able to make available to members on the ASE website all issues of AJE that they are entitled to, online as PDF files. Volumes 1-8 of the Journal have been scanned and PDFed, and the abstracts (which will be available to all visitors) are being currently proofed to make sure no mistakes have sneaked through during processing. Other updates on the website are 1) an

updated "Upcoming events" section, and 2) a slight change in design with the logo of our sustaining members now appearing on the front page of the website on a rotational basis.

Narelle Richardson has a keen interest in seeing how the new on-line system works because, if it works as planned, it should eliminate much of the laborious manual handling of the membership database. As Narelle recently retired from UTS after 29 years (congratulations Narelle), a more automated system will make life easier for the ASE Membership Committee (Narelle will still be keeping tabs on ASE activities).

The proposed National Animal Welfare Bill was examined, along with over 200 public submissions, by the Senate Rural and Regional Affairs and Transport Committee, which published its report in July 2006. They recommended that the

Bill should not proceed. ASE's submission was quoted in part in their findings. The major issues for us were the expansion of definition of "animal", which could have included crustaceans, limited supply of many invertebrate test species and the effect that these would have on sediment testing at least.

With Interact in 2006 and SETAC world congress in Sydney 2008 (3rd-7th August), there will be no ASE conference in 2007 but we will keep you informed of any workshops and other activities of a lesser scale for 2007.



AJE NEEDS YOU!



## ***Australasian Journal of Ecotoxicology***

### **NEEDS YOU**

to submit high quality, complete research articles for forthcoming issues of the journal. Support the Society's journal by publishing your work, either as a

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- Short Communication
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We aim to give you faster turnaround and publication in a well respected internationally-read journal.

**For more information, please contact:**

Dr Scott Markich

Editor-In-Chief

Australasian Journal of Ecotoxicology

Level 1, 467 Miller St

Cammeray 2062

AUSTRALIA

Email: [smarkich@optusnet.com.au](mailto:smarkich@optusnet.com.au)

Fax: +61 2 9460 2711

Mob: 0403 750 199

# Regional Reports

## NSW

### Ecotoxicology and Environmental Contaminants Section (EEC) & DEC Centre for Ecotoxicology, Lidcombe



The EEC Section passed a busy winter with its ecotoxicity testing on different hazardous aquatic samples from spills and incidents and preparing samples for Fisheries' investigation on dioxin in Sydney Harbour. The Section's other involvements such as contaminants advice, emergency responses, environmental risk assessment for legal service also continued at the usual fast pace. Contaminated sites at Botany, Homebush Bay, other sites in Parramatta River, dredging in Newcastle Harbour and risk assessment manuals for the National framework for Chemicals Environmental Management in Australia (NChEM) have provided a continuous high level of "background" activity, on which the extra requests are added. For those interested in more details of NChEM, DEH have published a discussion paper on their website [www.ephc.gov.au/ephc/chemicals\\_mgt.html](http://www.ephc.gov.au/ephc/chemicals_mgt.html) with submissions requested by 29th September. Moreno Julli has been involved in examining the toxic effects of leachate from slag, used for roadwork, on the aquatic environment.

Dr. Reinier Mann recently arrived in July from Portugal to join the CET as a Post Doctoral Fellow to work on a NSW Environmental Trust funded project investigating amphipod embryogenesis as a rapid indicator of sediment quality. The project is being undertaken in collaboration with CSIRO (Stuart Simpson and Jenny Stauber) and is aiming to develop a rapid sub-lethal toxicity test for contaminated sediments using the amphipod *Melita plumulosa*.

Ross Hyne and colleagues are planning to resume the project work on the effects of pesticides in the Coleambally Irrigation Area (CIA) rice fields on

the population structure and gonadal development of the Southern Bell Frog as the new rice-growing season starts soon. Nick Spolyarich is currently analysing his tadpole and frog population survey data from the CIA rice fields of the previous season for his MSc preliminary assessment seminar. Nick has just completed some laboratory tests using *Limnodynastes tasmaniensis* tadpoles, that also occur in the CIA. Tadpoles and frogs collected from his study sites have also been dissected for assessment of gonadal condition and have been sent for histological sectioning.

Tony Roach and colleagues are close to completion a project in collaboration with CSIRO and the University of Canberra funded by the Environmental Trust to look at a range of things including bioaccumulation, biomarker and macrobenthic community (> 500 µm) responses to sediment contamination. The field and laboratory components of this project have now been completed and the data analysis and write up are underway. Tony is currently writing up a report on the Sydney Harbour dioxin project.

Anh Tran Thi Kieu, a PhD student with UTS, is well on track with her thesis write-up, despite recently being forced to take a 4-week break back in Vietnam for health reasons.

Catherine Choung has recently returned from her South American travels undertaken to aid in her recovery from her Honours work last year. She has recently started her PhD scholarship from Land and Water (with the UTS and NSW-DPI) and is currently working on a presentation she will make to Land and Water in September, outlining her proposed project.

*Ron Patra & Ross Hyne*

**Institute for Water & Environmental  
Resource Management  
Department of Environmental Science,  
University of Technology, Sydney**

Life is settling into a routine at UTS as we move around our super new labs. There is ecotox a plenty with a swag of honours students busily finishing lab and field work before the dreaded thesis write up and PhD students plugging away.

Janine Wech has been busy assessing the impacts from a disused tip site on macroinvertebrate communities of Botany Wetlands and has been supported by Sydney Water and Jenny Stauber's CSIRO Land and Water group. Janine is supervised by Alex Pulkownik and Richard Lim.

Meanwhile.. on the other side of the city.... Orsolya Parkanyi is spending her days at the DEC labs under the guidance of Fleur Pablo, Ron Patra and John Chapman. She is working on the effects of sewage overflows on the soil around "pop-tops" in urban sewage lines and is supervised at UTS by Tally Palmer, Richard Lim, Grant Hose and Peter Jones.

Chris Rawson, Heather Brown & Lisa Hamilton are moving ahead with their EDC related PhD projects, despite both Richard Lim and Anne Colville being on extended overseas trips. Richard is currently on sabbatical and is visiting labs in Canada, the UK, Singapore, Malaysia, Japan and New Zealand that are conducting research on EDCs. Anne Colville is surveying the pollution of European rivers, largely from the comfort of cruise boats and riverside camping areas in a 4 month holiday that will take her across most of Europe.

Karen Sommerville, is currently writing up her thesis on the ecology and reproductive biology of threatened saltmarsh species at Sydney Olympic Park. Still on things photosynthetic, Rachel Smith is finding some excellent results in her PhD study of nutrient and storm water impacts on algae using PAM.

Nga Thi Thu Pham, a student from Vietnam, being supervised by Rod Buckney, and Alex Pulkownik, is completing her PhD work and writing up her thesis dealing with investigations of the metal toxicity in a tropical freshwater lake at Hanoi in Vietnam.

Phanchai Menchai has been working away in the DPI labs at Wollongbar (supervised by Lukas van Zweiten and Grant Hose ) and now has

manuscripts ready for submission that document his work on DDT persistence and bioavailability in aquatic sediments. Phanchai is working tirelessly, with plans to submit his thesis soon. Catherine Choung has jumped straight into her PhD that will investigate the impacts of pesticide mixtures on macroinvertebrate assemblages. Catherine is supervised by Grant, Ross Hyne (DEC), and Mark Stephens (DPI).

Grant Hose has been learning that some groundwater bugs eat copper for breakfast, as part of his work on risk assessment, water quality guidelines and tox test methods for groundwater bugs. Grant has recently received funding from NSW Environment Trust and CRC CARE to continue his groundwater ecosystem research, and include microbial assessments and ecotoxicology. He hopes to soon advertise for a Post-doc with environmental microbiology and ecotox skills.

Grant is also working with Tally Palmer, and the Ecology Lab P/L on a coal industry funded project to investigate salinity impacts on stream biota. Tally is providing her considerable expertise in salinity impacts that she developed in South Africa. Aside from playing with bugs and salinity, Tally continues to lead IWERM into an exciting future.

Still on salinity, Yin Latt Phyu is working on effects of salinity on endocrine disrupting effects of atrazine. At the moment she is mostly working at the DEC labs at Lidcombe.

Alex and Fleur Pablo (DEC) will be shortly advertising for a student to start an MSc project on Development of protocols for phytotoxicity assessment. If you are interested, or know someone who might be, please contact Alex Pulkownik on [Alex.Pulkownik@uts.edu.au](mailto:Alex.Pulkownik@uts.edu.au) .

As you can see, Ecotox things are chugging along nicely at UTS....

*Grant Hose*

**RMIT University**

Kathryn Hassell is must be well underway with her PhD having designed a contraption to alter dissolved oxygen levels in water without bubbling gas and has data from a three factorial experiment in under a year! Ben Kefford came back from Casey, Antarctica and then headed off to the ASLO in Canada and then for a break to chill-out but is now back and is getting to grips with starting a ARC Linkage Post Doc, in conjunction with Queensland Department of Natural Resources, Water and Mines, the Victorian EPA and Department of Primary Industries and Corangamite CMA. The Linkage project is looking at the combined effects of suspended sediment and salinity. Jacqueline Gorski is in the final stages of her PhD on the effects of trace metals in abalone. You can see a part of her work in the May 2006 issue of ET&C. Pattareeya Ponza is writing up her thesis on molecular marker in the rainbowfish.



Warren Davies, also from the ecotox lab at RMIT, recently completed writing up his PhD thesis 'Effects of *Nodularia spumigena* and the toxin Nodularin on Aquatic Fauna from the Gippsland Lakes'. This is currently being reviewed. The study investigated lethal and sublethal effects of this blue-green algae on a range of animals from the Gippsland Lakes with special reference to enzyme and DNA biomarkers. Currently employed with the Marine Science Unit, EPA Victoria, Warren has been continuing his work in the Gippsland Lakes by establishing and managing a number of monitoring projects.

Dayanthi Nugegoda worked at ANSTO in February 2006 on an AINSE research grant to trace the uptake of zinc and cadmium by yabbies, ably assisted by Ryan Blackney (who completed his Honours in Ecotoxicology in 2005) and enjoyed working with radioisotopes after some years. She also attended SETAC Europe in The Hague in May this year where she met up with some ASE colleagues from Adelaide and Brisbane who she hadn't met with since the ASE conference in Melbourne! She has been busy finalising a project on the effects of pesticides on early life stages of Murray cod and rainbowfish in

collaboration with Goulburn-Murray Water, on which Scott Raymond did some excellent work; trying to work up some mosquitofish collaborative research projects with Richard Lim's group and Vin Pettigrove of Melbourne Water and generally drowning in second semester teaching including a 3rd year course in Ecotoxicology. Five to six Ecotoxicology Ph.D research students should be submitting their PhD theses this year and Dayanthi will breathe a little easier then! These students include Liliana Zalizniak, Warren Davies, Scott Raymond, Jacqueline Gorski and Pattareeya Ponza. All except Pattareeya are gainfully employed. Pattareeya will return to Thailand where her family awaits her.

Dayanthi will soon be seeking a fresh new lot of Ecotoxicology and Ecophysiology research students so please do contact her ([dayanthi@rmit.edu.au](mailto:dayanthi@rmit.edu.au)) to visit RMIT's research facilities on the RMIT Bundoora Campus if you are interested in Honours and/or Ph.D. research.

### **Monash University Biological Sciences**

An ARC linkage grant investigating the macromolecular composition and photosynthesis of *Nodularia* sp. isolated from the Gippsland Lakes was recently awarded to Professor John Beardall (Monash Uni) and Dr Leanne Gunthorpe (PIRVIC). The project is titled 'Effects of Changes in Environmental Conditions on Ecophysiological Performance in *Nodularia* species'. It is a continuation of Jackie Myer's PhD, which investigated the effects of environmental parameters to the physiology of *Nodularia* sp. isolated from the Gippsland Lakes, Victoria, Australia.

### **Water Studies Centre**

Colette Thomas has been busy on her PhD project 'Development of a Bayesian Belief Network for ecological risk management: a tropical seagrass case study'. She recently presented her work at ASLO in Canada and at AMSA in Cairns. Colette's project aims to develop a Bayesian Belief Network (BBNs) Decision support tool (DST) that can help structure complex decision processes, support analysis of the consequences of possible decision choices, and conduct scenario analyses within an ERA context. The project case study addresses the risk of Herbert River flood plumes to seagrass. Colette's thesis will be completed by December 2006.

This is my last report as Victorian Regional Rep as I am leaving the Water Studies Centre at the

end of August after 4 years and 4 months. Over this period, I have worked closely with Prof. Barry Hart investigating the use of Bayesian modelling tools to analyse, characterise and prioritise risks, inform and improve decision-making, and promote stakeholder engagement and adaptive environmental processes within an ERA. In September I will be joining the Integrated Catchment Assessment and Management (iCAM) group within the Centre for Resource and Environmental Studies (CRES) at ANU in Canberra. The Research Fellow position was created out of an \$8 million Commonwealth Environmental Research Facility (CERF) grant awarded to a research consortium involving University of Tasmania, RMIT University and ANU, as well as state resource management agencies and regional catchment management organisations in Victoria and Tasmania. The CERF project is titled 'Landscape Logic: linking land and water management to resource condition targets' and the goes for 4 years. I will also be working on a project with CSIRO Land and Water investigating the impacts of climate change on the Macquarie Marshes.

In other news, Michael Barry (formerly of RMIT and Monash University) will soon be moving with his family to Oman to commence a lecturing position in ecotoxicology at the Sultan Qaboos University. We wish Michael, Srei, Amy and Daniel all the best on their new adventure!

*Carmel A. Pollino*  
*Water Studies Centre, Monash University*

## **Qld** **Hydrobiology**

Ecotox work continues here with our continued involvement with the characterisation of effluent from a number of WWTP's in SE Queensland along with other ongoing projects. Our big announcement for this quarter is the forthcoming opening of our new Western Australian office. Hydrobiology WA will open its doors for business in September and we welcome Phil Whittle to the team as the Regional Manager and Principal. Phil's background is geochemistry, oceanography and limnology and he has extensive experience in the mining industry. Contact us for further



information about Hydrobiology WA or catch Phil or me at the Interact 2006 conference in Perth, 24 to 28 September.

*Dustin Hobbs*

## **Environmental Resources Management Australia (ERM)**

Having left DEH (Chemicals Assessment Section, Canberra) for sunny Brisbane to take up environmental consulting (again!), I recently presented a seminar to the Brisbane branch of the Australian Contaminated Land Consultants Association (ACLCA) on 'Ecotoxicology and its Applications to the Assessment & Management of Contaminated Sites'. Ecotoxicology is a tool I have used in the assessment and management of environmental contamination (soils, tailings, groundwater, surface water, effluent, sediments). The seminar provided some project-related experiences including simple and more complex investigation techniques (eg. deriving site-specific guidelines, direct toxicity assessment). The seminar created interest and discussion on the science and its applications to the Queensland situation.

*Jeff Rabbidge*

## **Queensland Natural Resources Mines and Water (aquatic ecosystems)**

Rajesh Prasad is working feverishly hard in the lab to determine long term effects of salinity on the life cycle of a Rainbowfish and Gudgeon and preparing to write up his PhD as the deadline for completion draws closer. Nelli Horrigan has completed a number of modelling activities on salinity and turbidity effects in aquatic ecosystems most notable of which was the salinity index for Queensland. Nelli has now left NRM&W to take up a post doctorate position at the University of New Brunswick in Canada and we wish her all the best in her new position. I have been looking at the variation in macroinvertebrate salinity tolerance in Queensland and more broadly in Eastern Australia and am continuing development and application of a salinity risk assessment procedure to develop biologically based salinity guidelines for freshwater ecosystems. We would also like to welcome a new member of the team, Farah Zavahir who will be working on modelling approaches to revise reference ranges for turbidity and sediments in Queensland's riverine ecosystems.

*Jason Dunlop*



## **TAS**

### **Australian Antarctic Division**



The highlight of last month's activities at the Division was the SCAR Open Science Conference held in Hobart. Scientists from the EPiC group investigating the effects of contaminants on marine and terrestrial ecosystems and methods for contaminated site remediation in Antarctica presented results of recent research in numerous posters and oral presentations at the conference which included delegates from all of the nations occupying territories or running research stations on the Antarctic continent. The conference was a huge success and the AAD is certainly leading the way in environmental monitoring and remediation research and work in Antarctica.

On the research front, in EPiCs' Marine Ecotoxicology laboratory, Catherine King and Anne Palmer have been conducting toxicity tests using marine invertebrates collected intertidally from Macquarie Island by Cath and Ben Kefford (RMIT) on their return voyage from Antarctica in April this year. This work follows on from the research done at Casey last season in which rapid assessment methods were used to determine the response of native Antarctic invertebrates to a range of contaminants. The invertebrates from Macquarie Island are being screened for their tolerance to metal contaminants in order to establish some basic sensitivity data for sub-Antarctic biota.

Catherine King and Glenn Johnstone have just completed their commercial diving qualifications (7 weeks of glorious diving in near zero visibility in the Tamar River) in preparation for another season at Casey Station. Most of the team which includes Martin Riddle, Jonny Stark, Catherine King, Glenn Johnston, John Runcie (UTS), Nicole Hill and Graeme Clarke (students from UNSW) will be heading south on Voyage 1 in October so the next couple of months will have us all busily working through last years samples and data as well as preparing for the upcoming season.

*Catherine King*

## **WA**



Tarren Reitsema is dedicating an important portion of his time to the management of the ASE meeting in Perth, reviewing abstracts and answering individual needs of participants. Working at the now called "Department of Water, Western Australia", Tarren is investigating the impacts of acid sulphate runoffs on ecological integrity and human health throughout the south west region. Tarren is also directing an exciting project on antifouling biocides in the Perth coastal waters – most interesting, given that the 2008 national ban on TBT is approaching rapidly!

Jill Woodworth is also extremely busy participating in the organization of the annual ASE meeting in Perth, and attending many details in order to organize a successful meeting. But most of the time, Jill is working at Geotech where she is developing freshwater toxicity testing using new native Western Australian freshwater species.

Diane Webb is progressing with the Swan River project conducted in collaboration with the Department of Environment WA, where parallels are drawn between the contaminant inputs from the urban drains and the health of the river fish. Sajida Bakthyar is pursuing her PhD by collaborating with the petroleum exploration industry to develop novel drilling fluids of low toxicity to marine vertebrates. As for Melinda Ranaldi, she recently left Curtin University where she is (almost) finished her PhD on otolith chemistry, to work with the newly born Department of Water WA. Acid sulphate runoffs in the Swan River keep Melinda occupied between field sampling and reporting. As for Monique, well, she is teaching, and teaching, and...

*Monique Gagnon*  
*Curtin University*

# Student Profiles



**Name:** David Strom

**Institution:** University of Wollongong

**Degree:** Doctor of Philosophy  
(Environmental Chemistry)

**Completion:** February 2008

**Thesis Title:** Development of Robust Guidelines  
and Assessment Procedures for Metal  
Contaminated Sediments

#### Brief outline of results so far:

My research aims to develop the protective and predictive ability of sediment quality guidelines for metals through understanding the factors controlling metal bioavailability as well as addressing the importance of exposure pathways of metals to test species. The project is being undertaken in collaboration with the Centre for Environmental Contaminants Research - CSIRO with industry

sponsors Rio Tinto, BHP Billiton, ACMER and Xstrata.

Research has progressed well having just completed year number two. Numerous spiking studies of sediments with varying metal-binding properties have improved our understanding of metal partitioning. Results indicate that silty sediments rich in iron and organic carbon have a greater capacity to bind copper than sandy sediments with less iron and organic carbon. Whole sediment bioassay results to date are in good agreement, showing that sediments with high copper binding capacity are less toxic than sediments with low copper binding capacity to an amphipod and two species of bivalve. Emphasis has now shifted towards validating the exposure pathway primarily responsible for toxicity and identifying key sediment parameters suitable for predicting toxicity.

Experiments currently in progress include examining the influence of sediment pH on metal bioavailability, characterising exposure pathways (particle ingestion vs dissolved metal uptake via pore water and overlying water) and expansion of local species sensitivity data. Preliminary bioassays are yielding encouraging results which will be presented at Interact in Perth 06<sup>th</sup> - Session 5, 11:20am!

#### In the future, I hope to...

See the fruits of my research applied in the real world. That, and continue research in ecotoxicology attempting to answer the infinite number of questions mounting in this project!

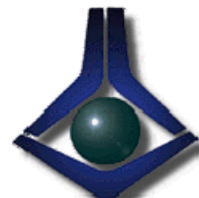
## Attention Students!

The University of Wollongong would like to invite you to participate in the **14th Annual RACI Environmental and Analytical Research and Development Topics 2006** meeting. It is running from 5<sup>th</sup> – 8<sup>th</sup> December.

This national conference in analytical and environmental chemistry is run by postgraduate students for postgrad students. It offers an opportunity for honours, masters and PhD students (and early career researchers) to present their research in a friendly and encouraging environment.

Registration is free.

Please contact [Jacqueline.Levy@csiro.au](mailto:Jacqueline.Levy@csiro.au) or 02 9710 6928 if you are interested in attending.



# Postdocs, Jobs, Awards

## POSTDOCTORAL POSITION 2 YEARS FULL-TIME CONTRACT

Development of the scientific requirements of an Environmental Management Plan (EMP) for the pearling (*Pinctada maxima*) industry

A two year full-time position is available with the School of Environmental and Life Sciences at the University of Newcastle.

The successful applicant will co-ordinate a research project funded by The Pearl Producers Association of WA and FRDC investigating the development of an environmental management plan for the WA pearling industry.

Research involves monitoring benthic invertebrates and sediment chemistry at pearl farms and other localities in WA.

The applicant must hold a Ph.D. or have submitted a thesis in marine biology, ecology, ecotoxicology or related discipline.

The project would involve travel and the ability to work in the field in remote locations is required. Experience in the taxonomy/identification of marine benthic invertebrates and chemical analysis of sediments is desirable. Opportunities also exist to initiate and/or engage in related projects involving marine ecology and ecotoxicology. Candidates with a strong record of peer-reviewed publication will be viewed favourably.

For further information, contact Dr. Geoff MacFarlane (see below) or Dr Maria Schreider (contact +61 2 4348 4228). Applications should include the following materials: (1) cover letter, (2) curriculum vitae, (3) copy of academic transcripts, (4) proof of citizenship or permanent residency, and (5) the names and contact details of at least two referees. This information should be sent to Dr. Geoff MacFarlane. Closing Date: 1st Sept 2006.

Send application by Sept 1st 2006 to:

Dr Geoff MacFarlane  
School of Environmental and Life Sciences  
The University of Newcastle  
Callaghan, NSW 2308  
Australia  
+61249217858 (Tel)  
+61249216923 (Fax)  
[geoff.macfarlane@newcastle.edu.au](mailto:geoff.macfarlane@newcastle.edu.au)

## 2006 Australasian Science Prize CALL FOR NOMINATIONS

Nominations are now open for the 2006 Australasian Science Prize for outstanding achievement by an Australasian scientist or small research team.

Australasian Science is Australia's only monthly science magazine for the general public. The Australasian Science Prize recognises world-class science by Australasia's most inspiring minds.

Past Prizes have been awarded to researchers for:

- developing microstructured polymer optical fibres that are cheaper, tougher and more flexible than current silica fibres;
- developing DNA drugs that act as molecular scissors with therapeutic potential in the treatment of cancers;
- determining how sensations are processed and transmitted in the brains of mammals;
- extending knowledge of the behaviour and intelligence of bees to artificial intelligence.

Australasian Science hasn't sought sponsorship for the Prize, preferring that it be seen as priceless recognition.

### HOW TO NOMINATE

Nominations should comprise a single-page abstract summarising work conducted by the nominee in Australasia and its relevance to the public. This should be signed by a proposer, a seconder and the nominee with full contact details, including e-mail addresses. An independent referee should be named.

Nominations may be for an individual or a pair/small group provided they have been contributing equally to a single, clearly identified project.

Evidence of the work cited should be included. This may be a peer-reviewed paper or set of papers published between 1 September 2005 and 31 August 2006 along with copies of other communications of the work, such as media stories, radio and TV broadcasts.

The Editor and senior writers of Australasian Science will comprise the judging panel, and reserve the right to make their own nominations. The winner(s) will be announced in the November/December 2006 issue of Australasian Science.

### CLOSING DATE

Send nominations by 15 September 2006 to:  
The Editor, Australasian Science, Box 2155,  
Wattletree Rd PO, Vic 3145.  
Fax: (03) 9500 0255 E-mail: [science@control.com.au](mailto:science@control.com.au)

# Funding Opportunities

**Aust Gov Water Fund: Under Grant Program Raising National Water Standards;** \$100,000 to \$1,000,000

[www.nwc.gov.au/water\\_fund/rnws\\_grants.cfm](http://www.nwc.gov.au/water_fund/rnws_grants.cfm)

to Assist in development of necessary tools for good water management in Australia

Submissions by 16 September

**AusAID International Seminar Support Scheme;** \$A,500-50,000

<http://www.usaid.gov/partner/global/issc.cfm>

The International Seminars Support Scheme (ISSS) is an Australian Government aid program administered by AusAID. ISSS funds attendance at international development-oriented seminars in Australia and overseas.

**Australian Centre for International Agricultural Research (ACIAR); R&D Development Projects;** \$50,000 to over 1m

<http://www.aciar.gov.au/web.nsf/doc/COLS-5HXQZO>

Supports bilateral research and development in a broad range of agricultural areas, including crop production and protection, animal health and animal production, fisheries, forestry, land and water resources management and postharvest technology and also economic and policy issues concerned with the management of agricultural systems and natural resources.

**Boehringer Ingelheim Funds; Travel Allowances to PhD students and post-doctoral scientists;** up to 3 months;

[www.bifonds.de/travel/inhaltr.htm](http://www.bifonds.de/travel/inhaltr.htm)

For PhD students (<31yo) and post-doctoral scientists (<33yo) aimed at supporting young scientists in acquiring experimental qualifications necessary in basic research. Not for vocational training or conferences, symposia or workshops. Travel allowances enable recipients to visit laboratories further afield to study clearly-defined techniques, which may ensure that both graduates and their supervisors are provided with the scientific and personal prerequisites before beginning a PhD thesis. Also supports participation in research-orientated courses and summer or winter schools where a selected number of participants learn clearly-defined techniques in practicals as well as in lectures and discussions.

**Department of Foreign Affairs and Trade (DFAT); Australia-India Council Grants**

[http://www.dfat.gov.au/aic/aic\\_apply.html](http://www.dfat.gov.au/aic/aic_apply.html)

The AIC supports activities designed to promote a greater awareness of Australia in India and of India in Australia, including visits and exchanges between the two countries, and development of institutional links.

Any party whose project meets the sponsor's objectives may apply. Program categories include: Australian studies; commerce; education; Indian studies; institutional and network links; international relations; performing & visual arts; print & electronic media & film; public awareness; science & technology; and sport.

**Department of Industry, Tourism and Resources Innovation Access Program (IAP);** \$6 million available [don't spend it all at once!]

[www.industry.gov.au](http://www.industry.gov.au)

Provides funds for cutting edge science and technology research. This includes conference loans, access to international facilities (when resources are unavailable in Australia) and funds towards the development of an international science and technology network.

**German Research Council (DFG)**

Cooperative Research Grants for short-term research visits, workshops, post-doctoral fellowships (>2 weeks duration); [www.dfg.de/en/index.html](http://www.dfg.de/en/index.html)

DFG's mandate according to its statutes is to serve science and the arts in all fields by supporting research projects carried out in universities and public research institutions in Germany, to promote cooperation between scientists, to forge and support links between German academic science and industry, and with partners in foreign countries. In doing this, it gives special attention to the education and support of young scientists and scholars. The DFG is a partner organisation of the Australian Research Council. Successful Australian-German research projects will generally receive funding from both sides.

**International Science Linkages; Strategic policy and International Science and Technology Networks**

<https://sciencegrants.dest.gov.au/isl/Pages/Home.aspx>

Strategic Policy enables the Australian Government to support international scientific cooperation in priority areas of science with key countries. It includes support for: bilateral activities with priority countries; Australian participation in key multilateral international activities, such as under the auspices of the OECD and Asia-Pacific Economic Cooperation (APEC); and other strategic activities that meet the objectives of the ISL programme, such as involvement in key scientific showcasing events. The International Science and Technology Networks (ISTN) component of the ISL programme complements Competitive Grants funding and Strategic Policy by providing targeted support for specific activities using the networks and expertise of particular organisations.

# Just released!

## Chemical Management framework discussion paper released

A discussion paper on the development of a National framework for Chemicals Environmental Management in Australia (NChEM) has been released by the Environment Protection and Heritage Council.

The paper discusses the NChEM proposals and the benefits they would deliver, such as the streamlining of regulatory systems, as well as integrating national chemical assessments with State and Territory management approaches.

Through NChEM, the EPHC is focusing on improving environmental and health outcomes (where environmental exposure leads to health impacts) within the industrial chemicals management system as a priority. NChEM is also proposing some targeted improvements to the agricultural and veterinary chemicals (agvet chemicals) system administered by the Australian Pesticides and Veterinary Medicines Authority (APVMA).

The key elements of NChEM are a set of four linked action areas:

- Strengthening Environmental Risk Assessment –better consideration of environmental impacts in national chemical assessments;
- Streamlining Environmental Controls – nationally agreed actions to control risks to the environment from high risk chemicals across all States and Territories;
- Informing Decisions – improving the capture of chemical impact information so that it is used effectively to inform decision making on chemicals; and
- Prioritising Action – strategic consideration of priority and emerging chemical issues affecting the environment.

It is proposed that NChEM be implemented in the following ways:

- Through an inter-governmental

agreement on managing chemicals in the environment. The parties to the agreement would be the Federal Government, and each of the States and Territories.

- EPHC would have an ongoing role and prime responsibility for implementing the agreement and reporting to COAG on progress.
- Federal Government chemicals assessment agencies (DEH, NICNAS and APVMA), and the State and Territory environment agencies would carry the major effort of implementing NChEM.
- Legislative review and changes may be necessary to ensure NICNAS and to a lesser extent APVMA, have the legislative powers to improve outcomes sought in chemical risk assessments, to better control and manage chemicals and ensure good information feedback on the impacts of chemicals in use.
- States and Territories will need to review to what extent their current legislation is adequate to implement and enforce national decisions, or whether new legislative linkages may be needed.
- Members of the community, users and industry will have an important role to play in assisting to implement the priority setting process. The stakeholder forum will need the contribution of industry, users and community to bring forward chemicals issues of concern and to help forge possible solutions to some of these issues to recommend to Environment Ministers.

The discussion paper is available at:

[http://www.ephc.gov.au/pdf/EPHC/NChem\\_Towards\\_Env\\_Sustainability.pdf](http://www.ephc.gov.au/pdf/EPHC/NChem_Towards_Env_Sustainability.pdf)

Submissions are invited and required by 29th September 2006

Reprinted with permission from: Land and Water News, 16 August 2006

Further information about Land and Water News is available at <http://www.halldedit.com.au/publications/lawn.htm>.

# Eureka Prize

## Land & Water Australia Eureka Prize for Water Research

Graeme Batley's team at the Centre for Environmental Contaminants Research (CECR), together with Bill Maher from University of Canberra, Ross Hyne and Tony Roach from Department of Environment & Conservation's Ecotoxicology & Environmental Contaminants Section, and Di Jolley from University of Wollongong were successful in being one of three finalists in the Land and Water Australia Eureka Prize for Water Research, to be presented at a gala presentation night on 22 August. The CECR research was directed by Graeme, Stuart Simpson and Jenny Stauber, and also involved significant contributions from Postdoctoral fellows (at the time), Catherine King and Anthony Chariton, as well as a number of other researchers and students. This research was funded in part by an Environmental Trust grant, which culminated in a very successful Sediment Assessment Handbook that was presented in a public seminar in June 2005, as culmination of an Environmental Trust Grant (and which has received over 25,000 website hits in just over 12 months).

The topic for the L&W prize was Development of science underpinning > sediment quality guidelines over the past 5 years. Details are on their web site: [http://www.aonline.net.au/eureka/water\\_research/2006\\_finalists.htm](http://www.aonline.net.au/eureka/water_research/2006_finalists.htm), and the prize includes \$10,000. The recognition encompasses research advancing the assessment and regulation of contaminants in aquatic sediments, involving revised assessment protocols, new toxicity tests, and improved frameworks, underpinning revised sediment quality guidelines and defensible management actions that are appropriately protective of Australia's benthic and aquatic ecosystems.

The team developed three new sediment test bioassays, a sensitive benthic alga *Entomoneis cf punctata* (the first such test reported internationally), an estuarine amphipod *Melita plumulosa*, and a bivalve *Tellina deltoidalis*. The CECR research also demonstrated that inadequate handling, storage and testing procedures can lead to changes in sediment chemistry that affect the bioavailability and toxicity of metals in sediments. Definitive recommendations on sediment handling and manipulation techniques were published in the Handbook on the CECR website. Another outcome of the CECR project was a new model for deriving sediment quality guidelines based on the concept of lethal body residues that accounts for the confounding factors using species sensitivity distributions. These studies demonstrated that metals are less toxic in sediments than implied by current international

guidelines, which may lead to unnecessary additional studies if the trigger is exceeded. CECR has expanded the framework for application of sediment guidelines to better incorporate multiple lines of evidence as a weight-of-evidence approach. CECR and collaborators are continuing the impressive progress in this area by improving current tests and developing more sensitive sublethal and chronic bioassays using species with different feeding strategies and burrowing behaviour, more rapid tests, a new sediment guideline for copper and a derivation framework for other contaminants. Congratulations to Graeme, CECR and its collaborators for a well-justified success as a finalist for the Eureka Prize.

*John Chapman*

**STOP PRESS: THEY WON! Congratulations Graeme and all the team, who were presented with the prize at the function on 22 August.**



*Eureka Prize winners: Jenny Stauber, Graeme Batley and Stuart Simpson.*



*Embargo 9pm, 22 August 2006*

*Media contact: Sue Nelson 0403 343 275, eurekamedia@austmus.gov.au*

## **How dirty is the bottom of the Harbour?**

We know the condition of the water in Sydney Harbour and other estuaries, bays and rivers. What about the mud at the bottom? Until now, there have not been consistent ways to measure these sediments, which are essential to aquatic life.

Research by a team from CSIRO's Centre for Environmental Contaminants Research, led by Dr Graeme Batley, has given us the tools to provide the answer. And their reward is the \$10,000 **Land & Water Australia Eureka Prize for Water Research**.

Aquatic sediments are important food sources and breeding grounds for aquatic animals—yet the same sediments are where most water-borne contaminants end up.

Prior to 2002, there were no standard guidelines on how to measure the environmental impact of contaminated sediments in Australia, under local conditions.

The Sydney-based CSIRO team took the lead in developing guidelines. Yet, when these guidelines were published in 2002, there was a new hurdle—no appropriate bioassays, and no consistent standards on how to collect and handle samples.

The team found a host of problems with the traditional methodologies that were in use around the world. For example, sediments are unstable and so the act of sampling could change the result. Also, small changes in the preparation of samples could lead to wildly exaggerated results.

They also found that in some cases the toxicity of metal contaminants was being overstated. Conversely they found that in other sediments the potential for contaminants to enter the food chain was understated.

Four years later and the team has created a wide range of reliable assays and procedures.

Their *Handbook of Sediment Quality Assessment* has turned out to be a best-seller—with over 15,000 downloads from their website. And their work is being used not only in Sydney Harbour to assess the impact of remediated harbourside industrial sites, but also at ports and mines around the country.

“This team has worked thoroughly and consistently in the less-than-glamorous world of aquatic mud. Their achievements will help protect Australian coastal waters for generations,” says Brian Sherman, President of the Australian Museum Trust.

The Land & Water Eureka Prize for Water Research is awarded to an Australian individual, team or organisation for highly innovative research that has made, or has the potential to make, an outstanding contribution to the protection, sustainable use and management of Australia's water resources and water-dependent ecosystems.

Web link: <http://www.clw.csiro.au/cecr/>

# *In the news* ...

## **Canada moves to strengthen limits on nonstick chemicals:**

### **Canada may permanently ban four fluorotelomer polymers.**

Environment Canada (EC) and Health Canada have proposed to control, limit, or ban widely used stain repellents that keep fast-food grease off clothes and nasty stains off carpets.

The proposed regulations, released on June 17, would make permanent Canada's temporary bans on four fluorotelomer polymers. Experts believe that this marks the first time a government has banned the importation or manufacture of a group of fluorotelomer polymers. Other governments, including the U.S. and the EU, are watching Canada closely.

"Sweden applauds Canada for taking this action," says Ethel Forsberg, director general of KemI, the Swedish Chemicals Inspectorate. "This action gives the European Union inspiration in our work to handle the risks of these very hazardous chemicals, which are some of the most persistent chemicals known." An Organisation for Economic Co-operation and Development workshop on these chemicals will be held in November in Stockholm.

Officials with DuPont, the manufacturer of two of the four substances targeted in the ban, issued a statement saying that Canada's action "is not warranted based on the available science." But John Arseneau, head of risk assessment at EC, has noted that these actions are intended to prevent future problems.

EC also proposed to ban the import of any other newly developed fluorotelomer polymers that can break down into long-chain perfluorinated carboxylic acids, which are persistent and appear to be accumulating in Arctic animals.

At the same time, EC officials are conducting negotiations with industry representatives that are modeled on a January U.S. EPA agreement with the eight major manufacturers of fluorotelomer chemicals. The chemical makers consented to

eliminate fluorotelomer emissions from factories and off-gassing from products. EC's goal is to reduce emissions from the >50 fluorotelomer chemicals that were already on the market before their potential effects were discovered.

EC is basing its decision on recent research showing that volatile fluorotelomer alcohols are being blown by the winds to remote locations where atmospheric reactions, microbial action, or animal metabolism convert them into nonvolatile, longer-chain perfluorocarboxylic acids. Much of this work comes from the labs headed by University of Toronto chemist Scott Mabury, Ford Motor Co. atmospheric scientist Tim Wallington, and EC scientist Derek Muir. An alternative hypothesis involving an old ocean source has been proposed by Stockholm University chemist Ian Cousins and DuPont scientists, but thus far no studies support the hypothesis.

Last year, Mabury and Mary Joyce Dinglasan-Panlilio found that a wide range of consumer and industrial fluorotelomer products released up to 4% fluorotelomer alcohols, which were present as residuals from their manufacture.

An important unresolved question is whether fluorotelomer polymers can break down and release fluorotelomer alcohols. If this process occurs, then carpets, clothing, and other treated products already in use or discarded could represent a long-term source to the environment.

EPA scientists say they are studying this issue. DuPont will spend \$5 million over 3 years to investigate whether 9 of its perfluorinated chemicals biodegrade, as part of a record \$16.5 million settlement with EPA.

*Rebecca Renner*

Reprinted from: Environmental Science and Technology Online  
Policy News, August 2, 2006

[http://pubs.acs.org/journals/esthag/index\\_news.html](http://pubs.acs.org/journals/esthag/index_news.html)



## **Synthetic fragrances perfume lake sediments**

### **Production of these persistent compounds has doubled since the 1990s, and scientists are concerned about sublethal effects.**

The scent of perfume behind the ears has timeless allure, but perfume raises scientific eyebrows when it persists in the environment. Research published today on ES&T's Research ASAP website (DOI: 10.1021/es060134y) documents, for the first time, a historical profile of synthetic-fragrance concentrations in lake sediment. The results show a dramatic rise in environmental exposure over the past 15 years—a potential concern if these persistent contaminants turn out to have biological effects, experts say.

Synthetic musk fragrances, far cheaper than and chemically dissimilar to the natural fragrance obtained from musk deer and musk ox, are found in common household detergents, soaps, shampoos, and cosmetics, says Keri Hornbuckle, an environmental engineer at the University of Iowa and a coauthor of the study. They have also been detected in human fat and breast milk.

U.S. manufacturers used 6500 t of synthetic musks in 2000, the last year for which data are available. The U.S. EPA lists HHCB (Galaxolide), the most common fragrance compound, as a high-production-volume chemical—>1 million lb/year are imported or produced. In addition, synthetic fragrances persist in the environment, accumulate in animals, and have an affinity for fat—all traits of persistent organic pollutants. These properties, combined with the sheer volume used, worry researchers, who have begun to track the environmental fate and biological impacts of synthetic fragrances, Hornbuckle says.

Hornbuckle and her colleagues dated two sediment cores from Lake Erie and Lake Ontario and analyzed the concentrations of five polycyclic and two nitro musk fragrances. They found that HHCB concentrations actually declined slightly from 1979 to 1990; however, from 1990 to 2003, levels of HHCB doubled in only 8 years. The dry weight concentrations of fragrances in sediment are in the parts-per-million range.

The concentration of HHCB over time mirrored the trends in U.S. consumption of all fragrances, including synthetic musks, terpenes, and other

compounds, levels of which have also risen significantly in the past decade, Hornbuckle says. Industry would not provide the researchers with consumption data for individual fragrances.

“This research indicates that production is increasing over time, and that is reflected in the concentrations of these musks that are accumulating in sediment,” says Chris Metcalfe, an ecotoxicologist at Trent University (Canada).

Research on Lake Michigan shows that sewers serve as the primary conduit for fragrances, which wash down the drain after being applied to skin, hair, and clothing, Hornbuckle says. She has also detected fragrances in rural air at levels higher than those of the most commonly used pesticides.

“Thus far, the European Chemicals Bureau has concluded that HHCB and AHTN [Tonalide, a polycyclic musk] are not PBTs [persistent, bioaccumulative, and toxic substances], and the European Scientific Committee for Cosmetics and Non-Food Products has affirmed their continued safe use in consumer products,” says Dan Salvito, an environmental scientist at the Research Institute for Fragrance Materials, an industry association.

However, Europe has phased out nitro musks over concerns that they are carcinogenic and endocrine-disrupting, says Roland Kallenborn, an environmental chemist at the University Centre in Svalbard (UNIS; Norway). Recent studies are indicating that polycyclic musks may have sublethal effects in fish; they bind to estrogen receptors and act as an antagonist to vitellogenin, an egg yolk precursor protein, Metcalfe says.

*Janet Pelley*

Reprinted from: Environmental Science and Technology Online  
Science News, July 26, 2006

[http://pubs.acs.org/journals/esthag/index\\_news.html](http://pubs.acs.org/journals/esthag/index_news.html)

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# Interact2006 Corner

## INTERACT 2006 UPDATE

24 -28 September 2006



The count down is on. Less than a month to go until Interact 2006.

Things are looking good for Interact 2006 in Perth with 200 early bird registrations and more coming in every day. We are now looking at around 400 delegates to create a great interactive and very social conference.

### Conference Format

In addition to a wide variety of scientific presentations as outlined in your Registration Brochure a full social program has been organised.

### Sunday

The Opening Ceremony will be on Sunday evening prior to the welcome Cocktail Party at Burswood Convention Centre. The preliminary format will be: Chair Oana Chirila, Welcome to country by aboriginal elders, welcome by presidents of RACI, ASE and CASANZ, musical interlude, speech by Dr Wally Cox, author of state of the environment report, invitation to drinks.

### Monday

Poster Viewing

ASE, RACI Environmental and CASANZ posters will be presented on Monday, the authors should be with posters 5-6 pm (Happy Hour) and during lunch and tea

times if possible. Lunches will be finger food so that delegates can mingle and view the posters and talk to the authors. Informal Dinner at Joe's Fish Shack at Fremantle. This includes bus trip to Fremantle, three course meal and drinks. There are great pubs in Freo for late night partying!

### Tuesday

Poster Viewing

RACI Analytical Chemistry posters will be presented on Tuesday Informal dinner at Indiana Teahouse at Cottesloe. Watch the sun set over the Indian Ocean. Includes bus trip, three course meal and drinks.

### Wednesday

The student lunch with speakers has been confirmed for Wednesday lunch time. Students and invited speakers can grab some lunch and head off to a private room for in-depth discussions.

ASE AGM prior to the Conference Dinner at Burswood.

### Thursday

Loud Shirt Day. A prize will be awarded for the loudest shirt at the last Happy Hour for the conference. Be in it to win it. Based on past performances it will be a close contest between Scott Wilson and Michael Warne!

See you all in Perth

*Jill Woodworth*

## Meanwhile, on the website ...

thoroughly checked and tested. There is still some work to be done, but you will be happy to know (I know Munro was!) that the first online membership renewal was successfully paid into ASE's accounts!

If you have any suggestions of things you would like to see implemented on the website, please don't hesitate to send us an email, we are happy to hear all kinds of whacky suggestions!

*Fred Leusch*

[f.leusch@uq.edu.au](mailto:f.leusch@uq.edu.au)

The member's online management system (or MOMS as we like to call it) is still being

# What's On

## ***IWA World Water Congress***

**10 - 14 September 2006**

Beijing, China

The theme for this conference is "Sustainable Water Management Practices."

For more information, visit the conference website:

[www.iwa2006beijing.com](http://www.iwa2006beijing.com)

## ***SETAC Asia Pacific.***

**18 - 20 September 2006**

Peking University, Beijing, China

The theme for this conference is "Growth with a Limit: The Integration of Ecosystem Protection for Human Health Benefits."

A special session is being organised to "Meet the Editors" where delegates will have the opportunity to hear from the editors of several high impact journals on how to publish manuscripts in these journals.

For more information, visit the conference website:

[oec.pku.edu.cn/setac](http://oec.pku.edu.cn/setac)

## ***INTERACT 2006***

**24 - 26 September 2006**

Perth, Western Australia.

Incorporating Australasian Society of Ecotoxicology, Analytical Chemistry RACI Division, Environmental Chemistry RACI Division Electrochemistry RACI Division, Metrology, Clean Air Society of Australia and New Zealand.

Keynote speakers include: Dr Robin Batterham, Professor Kevin Francesconi, Dr Jerry Neff, Professor Philip Rainbow, Dr Joe Tietge, Robyn Williams, Professor Yury Zolotov

For more information, visit the conference website:

[www.promaco.com.au/conference/2006/raci](http://www.promaco.com.au/conference/2006/raci)

## ***International Conference on Pesticide Use in Developing Countries: Environmental Fate, effects and Public Health Implications***

**16 - 20 October 2006**

A joint ANCAP / SETAC Africa Branch meeting.

Arusha, Tanzania

For more information, visit <http://www.ancap.org/>

[ANCAP-SETAC.html](http://www.ancap.org/ANCAP-SETAC.html)

## ***MIMAC 2006***

### ***International conference on Marine Incidents Management***

**19 - 20 October 2006**

Bruges, Belgium

For more information, visit [http://www.vliz.be/](http://www.vliz.be/projects/mimac/symp.php)

[projects/mimac/symp.php](http://www.vliz.be/projects/mimac/symp.php)

## ***SETAC North America 27th Annual Meeting***

**5 - 9 November 2006**

Montreal, Quebec, Canada

The meetings theme is "Global environment and sustainability: Sound science in a world of diversity."

For more information, visit the conference website:

<http://montreal.setac.org> (updated information on Socials, Short Courses and Student Activities has recently been added)

## ***13<sup>th</sup> SETAC Europe LCA Case Study Symposium***

**7 - 8 December 2006**

Stuttgart, Germany

The focus of the meeting is Environmental Products Declarations (EPD) with focus on the building and construction sector. Environmental Product Declarations (EPD) are amongst others the future key instruments to foster more environmentally sound production and consumption, which are used by various decision makers in many application areas. The main purpose of EPDs is to provide correct and verified information about the environmental aspects of products. EPDs are part of a broader concept which includes increasing the knowledge about products in material choice, providing a basis for documentation and environmental conscious planning the design of a building. EPDs will give a boost for the purpose of LCA, as one of its broadest and most visible application fields.

For more information, visit [www.setacmeeting.org/lca2006/](http://www.setacmeeting.org/lca2006/)

## ***International Conference on Environmental and Public Health Management: Aquaculture and Environment***

**7 - 9 December, 2006**

Hong Kong

For more information, email Prof. M.H. Wong

([mhwong@hkbu.edu.hk](mailto:mhwong@hkbu.edu.hk)) or visit the conference

website: [www.cieshk.org/conf/first\\_announcement\\_2006.htm](http://www.cieshk.org/conf/first_announcement_2006.htm)

## ***International Conference on Ecophysiology of Marine Organisms: Coping with the Environmental Changes***

**8 - 12 January 2007**

Hong Kong

For more information, email Dr. Kenneth Leung

([kmyleung@hkucc.hku.hk](mailto:kmyleung@hkucc.hku.hk))

***International Symposium on Sustainable and Safe Water Supply***

**15 - 16 January 2007**

Hong Kong

For more information, email Dr. Kenneth Leung ([kmyleung@hkucc.hku.hk](mailto:kmyleung@hkucc.hku.hk))

***EmCon2007: International Conference on Analysis of Emerging Contaminants in the Environment***

**7 - 9 March 2007**

York, UK

For more information, visit [www.emcon2007.com/](http://www.emcon2007.com/)

***Fourth International Workshop on Brominated Flame Retardants***

**24 - 27 April 2007**

Amsterdam, The Netherlands

Online registrations now open; early registration deadline is 1 February 2007

Abstract submission deadline is 1 December 2006

For more information, visit <http://bfr2007.com/>

***SETAC Europe 17th Annual Meeting***

**20 - 24 May 2007**

Porto, Portugal

Submissions for session proposals requested before 15 August 2006 at

[http://www.parthen-impact.com/eventure/welcome.do?type=abstract&congress=44\\_AM07S](http://www.parthen-impact.com/eventure/welcome.do?type=abstract&congress=44_AM07S)

For more information, visit [www.setaceumeeting.org/porto/home/home.htm](http://www.setaceumeeting.org/porto/home/home.htm)

***The 5th International Conference on Marine Pollution and Ecotoxicology (ICME)***

**3 - 6 June 2007**

Hong Kong

The six themes of the 5th ICME will be : 1. Innovative technology in marine pollution 2. Chemicals of emerging concerns in the marine environment 3. Hypoxia and eutrophication 4. Pollution monitoring and remediation 5. Ecotoxicology and risk assessment 6. Persistent organic pollutants and endocrine disruptors.

Selected paper presented at the conference will be published in a special issue of Marine Pollution Bulletin

For details, visit: <http://www.cityu.edu.hk/bch/conf2007/>

***The 15th International Environmental Bioindicators Conference (IEBC)***

**7 - 9 June 2007**

Hong Kong

For details, visit: <http://www6.cityu.edu.hk/bhdbapp/whatsnew/default.htm>.

***9th International Conference on the Biogeochemistry of Trace Elements (ICOBTE)***

**15 - 19 July 2007**

Beijing, China

This conference broadly covers various aspects of trace element fate in the environment (soil, water), interactions with organisms, toxicity to ecosystems and to human health, remediation technologies, regulatory and policy aspects of trace element contamination.

Included is a special Session on "**Speciation and bioavailability of trace elements in aquatic systems**"

This session should bring together the scientists interested in trace elements in freshwater and marine systems, in their interactions with aquatic organisms, in the chemical aspects of speciation and in the links between speciation, bioavailability and effects.

The following topics will be addressed in this session:

- Progress on speciation of trace elements in aquatic systems: new concepts and modeling approaches.
- Analytical methods for trace element speciation: recent developments, field applications.

Bioavailability of trace elements for uptake and effects in aquatic organisms: links between speciation and bioavailability; mechanisms of toxicity and detoxification; field and laboratory systems.

The deadline for abstract submission is November 30, 2006

For details, visit: <http://www.conference.ac.cn/icobte.htm>

***Dioxin 2007***

**September 2007**

Tokyo, Japan

For more information, visit <http://www.ee-net.ne.jp/dioxin2007/dioxin2007.html>

***SETAC North America 28th Annual Meeting***

**11 - 15 November 2007**

Milwaukee, Wisconsin, USA

***5<sup>th</sup> SETAC World Congress.***

**27-31 July or 3-7 August 2008**

Sydney, Australia.

Following a successful bid to the SETAC World Council, SETAC Asia/Pacific won the rights to host the 5th SETAC World Congress in Sydney, Australia. This is somewhat of a coup as it will be the first time that a SETAC World Congress has been held outside of Europe or North America.

Keep watching this space for details!!!!

***SETAC North America 29th Annual Meeting***

**16 - 20 November 2008**

Tampa, Florida, USA.

***SETAC North America 30th Annual Meeting***

**20 - 24 November 2009**

New Orleans, Louisiana, USA.