NEWSLETTER

Endpoint

SOCIETY OF ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY AUSTRALASIA
(SETAC AU)

Volume 21 Number 2

August 2014

CONTENTS

Message from the Editor

Hi everyone and welcome to another cram-packed issue of Endpoint. Keep an eye out for future issues as Erik, my co-editor (and the person who really does all the work for me), is revamping the look of Endpoint. Can't wait to see what it will look like.

It is great to see all the regions getting on board and regularly submitting content for Endpoint. In this issue we are hearing from the Australian Capital Territory, New South Wales, Victoria and Northern Territory. It is great to see both Victoria and the Australian Capital Territory have recently held regional members meetings. Remember that you can get funding to hold regional meetings. Contact our Treasurer, Munro Mortimer for details in this regard.

It is also good to see students submitting their profiles for publication. I have a few backlogged for future issues so if yours has not been published in this issue, don't worry, it may be in the next issue. If you have not yet submitted your profile for publication in Endpoint, be sure to drop it off to Rhys Cartlidge so we can get you some notoriety. Also related to students is the chance to get your publications (including papers and your thesis) listed in Endpoint. Don't let all those years of hard work go unnoticed, be sure to send me the details of your publications so we can tell the whole country.

Other good reads in this issue includes Peta and Andrew's report from Science meets Parliament (SmP). SmP is a great initiative that I thoroughly recommend to anyone who has the time to attend. It is an annual event and SETAC Au will pay any actual costs for 2 members each year to attend SmP, including 1 early career scientist and 1 experienced scientist. Look out for the next SmP to be advertised in the issue or 2 of Endpoint.

The first glorious issue of the Australasian Bulletin of Ecotoxicology and Enviromental Chemistry (ABEEC) is out! Have a look at the first two papers - head over to the SETAC AU webpage (www.setac.org/sapau) and click on "ABEEC" in "Our publications" on the bottom left hand-side.

Of course the big ticket item for SETAC Au at the moment is our upcoming annual conference, this year in Adelaide. Time for any last minute decisions to attend. Remember that the AGM for both SETAC Au and SETAC AP will also be held in Adelaide concurrent with the conference.

Well that's about all for now so I hope everyone enjoys reading this issue of Endpoint.

David Everett (david.everett@ehp.qld.gov.au)
Editor

Sustaining Member

NSW Office of Environment and Heritage
http://www.environment.nsw.gov.au

From La Presidenta

Hello everyone,

I would have to say that since the previous edition of Endpoint the most dramatic scientific news has been the Federal Budget. There was at least $420m cut from key science and research agencies including the Australian Research Council (ARC), CSIRO, the Defence Science and Technology Organisation (DSTO), Australian Nuclear Science and Technology Organisation (ANSTO), Australian Institute of Marine Science (AIMS) and Cooperative Research Centres (CRCs) program. Many other programs have also been affected. These changes present many challenges for the future of science for the targeted agencies. These will have significant flow-on effects within our community, but it is a particularly difficult and distressing time for our colleagues facing forced redundancies and job losses.

Science Technology Australia (STA) has its latest newsletters on the web, with the most recent edition found at http://scienceandtechnologyaustralia.org.au/wp-content/uploads/2014/06/STA-Newsletter-May-2014.html . The newsletter reports the impact of the cuts and changes to the Federal budget, with a summary of targeted agencies and programs. They also include an interesting article based on the well-known higher education writer Geoff Maslen who has founded a free global university news site, with 60 education journalists based in more than 24 countries. This month a special report focuses entirely on what universities around the globe are doing to counter the effects of climate change.

There are loads of exciting events in the second half of this year. The **SETAC Asia Pacific Conference** is rapidly approaching, being held at the Adelaide Convention Centre 14-17 September 2014. The theme of SETAC 2014 is **Advancing Science for a Sustainable Environment**. Check out the conference website http://www.setac2014.com.au/. The event program has now been released with a fantastic range of sessions, and the large number of registrations indicate that it will be an exciting event.

The **2014 AGMs for SETAC-AU and SETAC Asia Pacific** will both be hosted at the Adelaide Convention Centre during the conference. The SETAC –AU AGM is scheduled for 17:30 Monday 15 September and the SETAC –AP AGM for 17:30 Tuesday 16 September. Room details will be available in the final program. We look forward to seeing you there!

Do you remember completing the **member survey** either online or at the Melbourne SETAC-AU conference last year? Andrew Hartford has invested a mammoth effort into collating this data, and has produced some fantastic summaries about the membership and what members want from the society. We are looking forward to presenting this information at the AGM in September.

There is an **Australian Academy of Sciences (AAS)** initiative to developing Decadal Plans for a range of disciplines. The development of a Decadal Plan for Chemistry has recently commenced. As part of the consultation process, there are a series of open forums called 'town hall meetings' around Australia. These meetings are to enable chemists (including environmental and ecotox chemists) to contribute to this document. Let's make sure that our views are heard! The question is: What do you think the challenges and opportunities for chemistry will be in the

From La Presidenta

next ten years? We hope you will attend a meeting and be part of this important conversation. For details on the decadal plan and a list of coming events, see www.chemistrydecadalplan.org.au. **A breakfast town hall meeting** will be hosted from **7.00 am on Tuesday 17th September at the Adelaide Convention Centre**. Please RSVP on http://www.eventbrite.com.au/e/chemistry-decadal-plan-2016-2024-tickets-12057868409 if you are interested in attending. A light breakfast (with coffee!) will be provided.

SETAC Asia/Pacific will also present a workshop in Ambon, Indonesia, to explore challenges and opportunities for high-quality data production in the context of environmental contaminants. Drs Amanda Reichelt-Brushett and Yusthinus Male will be running the workshop on titled "**Comprehensive and representative aquatic contaminant sampling, analytical integrity, and data publication**" in conjunction with the 2014 annual meeting of the Indonesian Chemical Society (ICS) at the University of Pattimura on the 14-15 September 2014. Discussions will focus on field collection through to analytical QA/QC. Emphasis will be placed on data interpretation and publication. More information can be found at http://www.setac.org/events/event_details.asp?id=460685.

We had a high number of outstanding honours theses submitted for the **SETAC-AU Honours Prize**. It was an extremely competitive round demonstrating the excellence in research quality and performance of our student members. The assessment process was very difficult for the panel. The winner of the 2014 award is Joshua King for his research on Ultra-trace determination of aluminium and gallium in marine waters. Josh's award is $800 towards registration, travel and accommodation costs associated with attending SETAC AP/AU 2014. We are looking forward to hearing about his research as an oral presentation at the conference in Adelaide in September.

To wrap up, there is a set of tasks generated from the AGM in Melbourne last October that we are still working on and we will endeavour to update you at the AGM in September. Until then, I will leave you with the words of Carl Sagan who said "Somewhere, something incredible is waiting to be known", I wish you good luck in finding it, hopefully within your science!

Best wishes,

Dianne Jolley (djolley@uow.edu.au)
President

Regional Reports

Australian Capital Territory (ACT)

The ACT regional branch of SETAC-AU held its second meeting after work on Friday 9 May 2014. Following on from the first meeting when it was agreed to rotate the chairing of meetings, we were comfortably hosted by Chris Lee-Steere in the National Press Club bar. Similarly to the first meeting, only five members were present but at least we had one new participant.

The main theme of the meeting was to update each other on environmental tox/chem. happenings in their areas:

University of Canberra: Rod Ubrihien (PhD student) is studying Cu and Cd exposure in the freshwater gastropod, Isidorella newcombi. A major focus of this work is to link measurable cellular and enzymatic biomarker responses to population and intergenerational level effects, thus, allowing sub-lethal measurements to reliably act as early warnings for higher order effects. Alissa Monk (PhD student) is working on mercury in dolphins and the history of contamination around Port Phillip Bay. Chamani MarasingheWadige (PhD student) is studying bioavailability and toxicity of sediment bound Cd, Pb, and Zn to the freshwater bivalve Hyridella australis under laboratory controlled and environmentally realistic conditions in the metal contaminated Molonglo River. Elevated concentrations of these metals in the river bed sediments have occurred due to historical mining activities at Captains Flat.

Australian National University: Jenna Roberts (PhD student) is writing up her PhD thesis and publications on pharmaceuticals and personal care products as endocrine disrupting chemicals in the lower Molonglo River. There are hydrochemical sewage traces of 17 compounds including steroid hormones that have estrogenic effects.

Murrang Earth Sciences: Julia Jasonsmith is working on contaminated lands and continuing with a monthly blog on ecotoxicology and chemistry.

Australian Environment Agency: Chris Lee-Steere reported the Department of the Environment uses a standard water body scenario to model pesticide concentrations in the environment, but he's been working on a desktop probabilistic approach to risk modelling for agricultural pesticides. He's hoping the Australian Pesticides and Veterinary Medicines Authority (APVMA) will publish the dry land probabilistic scenario.

Department of Agriculture: Gary Fan gave an update on the APVMA neonicotinoid insecticide and bee health review, new regulatory guidelines are available on the APVMA website, and the Department of Agriculture's work on removing legislation to regularly review old pesticides and veterinary medicines against contemporary standards.

Finally, we discussed ideas for the strategic direction of the ACT branch and SETAC-AU in general. A suggestion was that SETAC could push for pharmaceuticals to be risk assessed for their potential environmental impact before they are registered in Australia. Currently companies submitting data packages for all new pharmaceuticals proposed for registration by the Therapeutic Goods Administration (in the Department of Health) must include studies on environmental toxicology, fate and chemistry. However, these studies are not considered or assessed in the risk assessment of new pharmaceuticals.

SETAC-AU ACT branch meeting attended by (from L to R) Jenna Roberts, Julia Jasonsmith, Gary Fan, Chris Lee-Steere and Rod Ubrihien

Gary Fan (Gary.Fan@daff.gov.au)
Australian Capital Territory Regional Representative

Regional Reports

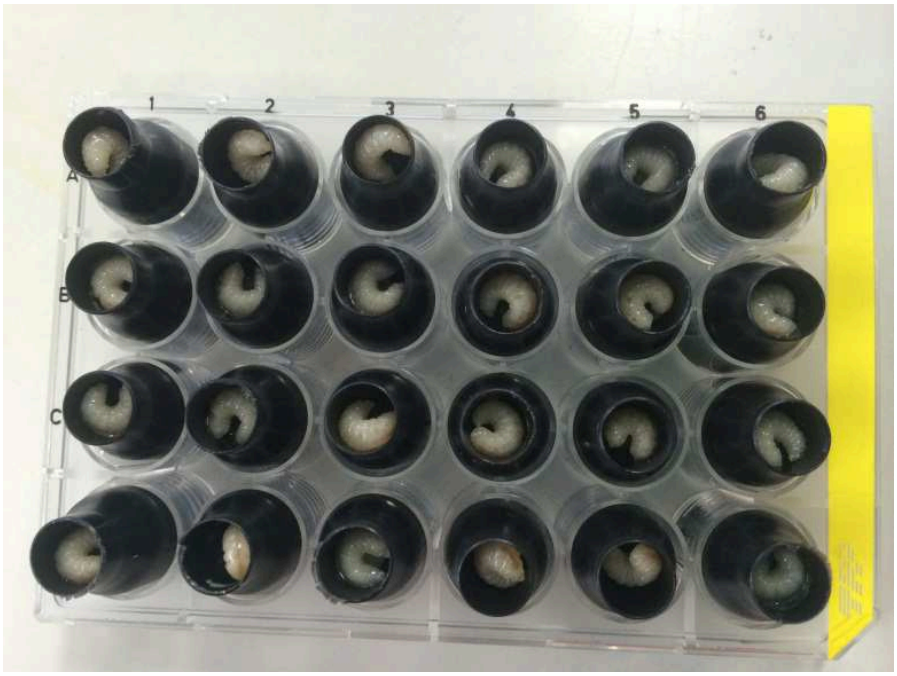
New South Wales

Exotox Services Australia – *Zoë Fluit* (zfluit@ecotox.com.au)

The Ecotox Services Australasia (ESA) team has been busy bees… well, busy working with bees! We are proud to announce that the 7-day single exposure larval toxicity test is now available. Thanks Amandine!

The test involves queen bees being restricted to a single frame using a specifically designed cage and laying eggs within the hive, in the care of the nursing worker bees. Within 24 hours, the hatched larvae are transposed or 'grafted' into specifically designed cups, mimicking a larvae cell (see below).

The cups containing larvae are returned to the laboratory where the larvae are raised under tightly controlled environmental conditions. Each larva is fed a mixture of royal jelly and sugars until they are four days old. At day 4, the test substance is mixed with the sugars and administered to the larvae. This procedure mimics exposure of bee larvae to low -level contaminated honey and pollen. The larvae are then fed the normal diet, free of the test item, for the remaining of the exposure period. ESA is currently working on the 22 day honey bee larval toxicity test (repeated exposure).



Hatched bee larvae transposed into specifically designed cups.

Farewell to Chris Doyle – *Zoë Fluit* (zfluit@ecotox.com.au)

In other Ecotox news, Chris Doyle, our long serving Laboratory Manager is no longer with us, owing to a difficult restructure. Chris commenced his time here at Ecotox in 2002, initially as a casual, at a time when we were endeavouring to achieve NATA endorsement and develop new toxicity tests to meet emerging demands in tropical marine systems driven by oil & gas and mining sectors. Chris lead the development of many of these new assays, and as Lab Manager oversaw a highly efficient operation capable of testing multiple samples with differing test requirements, likely un-matched in our region in breadth and scale. Chris trained and mentored many young ecotoxicologists who commenced their careers here at Ecotox, who then spread their wings and applied their skills in all sorts of interesting careers. The Ecotox team are sad to lose Chris, and wish him all the very best for the next stage of his career.

Regional Reports

New South Wales

Aquatic Ecosystems group, ANSTO Institute for Environmental Research – Tom Cresswell (tom.cresswell@ansto.gov.au)

University of Sydney PhD student Jung-Ho (John) Lee has finished his stint in our lab and has generated some great data on the bioaccumulation of Zn by the Sydney rock oyster (*Saccostrea glomerata*). John used the radiotracer ^{65}Zn to study the uptake and retention of Zn by the oyster from the dissolved and dietary pathways, the latter of which included assimilation from labelled algae and suspended sediment. John is currently developing a biokinetic model for Zn for oysters in Sydney Harbour and he will present this study at the Adelaide conference in September (Session 9B.4).

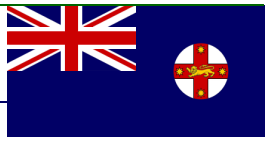
John in the radioecology lab at ANSTO conducting suspended sediment ingestion studies with ^{65}Zn and the Sydney rock oyster (*Saccostrea glomerata*).

We have had several successful Australian Institute of Nuclear Science and Engineering (AINSE) research grants awarded to our collaborators for the second half of the year. AINSE provides funds to assist researchers from member universities and institutions to gain access to the national facilities at ANSTO and other AINSE facilities. The successfully funded projects include using Australian Nuclear Science and Technology Organisation's (ANSTO) accelerator mass spectrometer (AMS) particle-induced X-ray emission (PIXE) microprobe to quantify the uptake, localisation and distribution of mesoporous silica nanoparticles and biomolecules in plants. Another funded study will use ANSTO's greenhouse and radiotracing facilities to assess the role of nutrient partitioning between fungi and plants as the main driver in the outcome of the competition between ectomycorrhizal fungal isolates for host plant colonisation.

Tom is busy processing the autoradiography data from the internal distribution kinetics of Cd within the freshwater prawn *Macrobrachium australiense*. The study involved exposing prawns to dissolved Cd for different exposure and depuration periods. The prawns were then sectioned and exposed to a phosphor plate, which reacts to the gamma energy from the bioaccumulated ^{109}Cd to give an image of the localisation of Cd within the prawn. The activity of Cd within the major organs was quantified for each exposure/depuration period to determine the kinetics of transport between organs. The data gathering takes a long time as each organ within each section of the prawn has to be manually drawn but the data is looking promising. Tom will be presenting the results of the study at the Adelaide conference in September (Session 6B.4).

Regional Reports

New South Wales



Centre for Environmental Sustainability, UTS – Bec Wood
(Rebecca.Wood@uts.edu.au)

Here at the Centre for Environmental Sustainability, University of Technology, Sydney, our group is continuing work on a broad range of topics including environmental flows, herbicide toxicity, and algal blooms. Rebecca Wood has just published a paper in Science of the Total Environment, co-authored with Simon Mitrovic and Ben Kefford titled: "Determining the relative sensitivity of benthic diatoms to atrazine using rapid toxicity testing: a novel method" and will soon be submitting a second article co-authored with Simon Mitrovic, Richard Lim and Ben Kefford titled "Does herbicide mode of action alter the relative sensitivity of benthic diatoms?". Steven Leahy has picked up a job as a research chemist after recently being awarded a University Medal for his First Class Honours thesis on antimony in estuaries working with Simon Apte of Commonwealth Scientific and Industrial Research Organisation (CSIRO). Carla Thomas is finalising her Honours thesis with Simon, Anne Colville and David van Reyk examining algal toxins on terrestrial plants.

M. Azizur Rahman is continuing his work on biotransformation of As by freshwater phytoplankton and ecology and trace element distribution in Japanese precious coral. David Nehme is progressing with his honours with Aziz Rahman, Lou de Filippis and Anne Colville, looking at the effects of arsenic species on growth, photosynthesis and oxidative stress on the freshwater phytoplankton, Chlorella sp. Anne Colville, Lou de Filippis and Aziz Rahman are also working with ThuyChung Nguyen, a PhD student from Engineering, on a project using a range of toxicity tests to study road dust and runoff. Renee Dowse will soon be submitting her thesis on salt ecotoxicology and risk assessment, she is then off to Rhodes University in Grahamstown, South Africa, where she has a Post-doctoral position in Freshwater Ecotoxicology.

Tom Cresswell (tom.cresswell@ansto.gov.au)
New South Wales Regional Representative

Regional Reports

Victoria

Deakin University – Dr Jules Mondon (julie.mondon@deakin.edu.au)

Trish Corbett has completed two seasons at Davis Station in Antarctica looking at the impacts of wastewater release on Antarctic rock cod. She loved it so much, she didn't want to come home! Trish's thesis 'Development of a histopathology Fish Health Index as a biomarker of pollution effect in Antarctica' is in the final stages of writing and is on track for submission before the end of the year. Trish worked closely with Dr Cath King and the Davis Wastewater Outfall Impact team, and Dr Jules Mondon at Deakin. The project has been supported by Australian Antarctic Division (AAD) Australian Antarctic Science funding, the Centre for Integrative Ecology Deakin University, and an ARC postgraduate scholarship, and has been vital in providing supporting evidence for the need to upgrade wastewater treatment prior to release into the coastal environment.

Shaun Davis has been working on investigating molecular, cellular and metabolic biomarker response in marine invertebrates exposed to hypersalinity and thermal increase. Shaun has spent time up in Shark Bay Western Australia working alongside a team from the Oceans Institute of WA who were investigating seagrass response to salinity gradients. His PhD is funded by the Centre for Integrative Ecology, Deakin University, and will be of particular interest to the desalination industry.

CAPIM (Centre for Aquatic Pollution Identification and Management)/University of Melbourne – Dr Kath Hassell (khassell@unimelb.edu.au)

A new research team, comprised of Professor Mick Keough (Department of Zoology and CAPIM), Professor Malcolm McConville (Metabolomics Australia and Department of Biochemistry and Molecular Biology) University of Melbourne, Dr Anthony Chariton (CSIRO, Lucas Heights) and Dr Melita Stevens (Melbourne Water) together with Dr Allyson O'Brien and Dr Sara Long (CAPIM) were successful in getting their Australian Research Council (ARC) Linkage proposal funded during the most recent funding round. The 3 year project aims to develop molecular 'omics' techniques at two levels of biological assessment (metabolomics – individual level, and ecogenomics – community level) for assessing the risk from pollutants to estuarine environments. At present these techniques offer great promise, but they must be cross-validated against existing methods to derive the best "toolbox". The project will involve laboratory exposures as well as field validation in test estuaries around Victoria.

Pat Bonney at one of his study sites in the North Maroondah study area, assessing the impacts of sediment releases on macroinvertebrate assemblages.

Patrick Bonney recently completed his Masters project, which looked at the effects of sediment releases from small weirs in forested headwater catchments on macroinvertebrate assemblages. The research indicated that the biological community within these streams was quite well adapted to sediment flushing, and showed good recovery within six weeks post-disturbance. He is now concentrating on writing up his results for publication, as well as sending out resumes and looking for exciting new work opportunities. Pat's project was supervised by Vin

Victoria

Pettigrove and Claudette Kellar. Its been busy, but exciting times for Claud, who is in the process of wrapping up all her work commitments before she heads off on maternity leave.

RMIT University – Rhys Cartlidge (rhys.cartlidge@rmit.edu.au) **and Dayanthi Nugegoda** (dayanthi.nugegoda@rmit.edu.au)

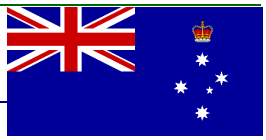
PhD student Rhys Cartlidge continues his project assessing petroleum hydrocarbon toxicity and how it is impacted upon by temperature changes. He has also been working to get the RMIT labs accredited to hold barramundi larvae at the facility so that they can be included in the novel 3D printed and laser cut flow through toxicity assays he is developing. Rhys continues in his role as SETAC Au student representative and encourages any student who wishes to provide a student profile to contact him at Rhys.Cartlidge@rmit.edu.au.
Feng Zhu and Yushi Huang are working in collaboration with Associate Professor Donald Wlodkowic to also develop 3D printed flow through toxicity assays. Fengs' work is centered around developing apparatus specific to zebrafish which is fully automated, high throughput and very user-friendly. Furthermore he is working with *Artemia* and is testing many types of plastics commonly used in 3D printers for inherent toxic properties. Yushi is an international PhD student who earned a scholarship from the Chinese government to come to Australia and complete his research. He is developing assays with the goal of testing for negative chemotaxis in a dynamic environment.

Furthering the Chinese connections, Dayanthi has been invited to China on a short term visiting Professorship and is looking forward to her visit to Tianjin which is the ancient capital of China. Meanwhile, Honours student Linda Kleinhenz has expanded her toxicity testing work to include the native amphipod *Allorchestes compressa*. Linda is working in collaboration with Parks Victoria to assess the effect of herbicides used to control *Spartina* on non-target invertebrates. She has been getting some very interesting and unexpected results and hopes to publish them after her honours work has been completed.

Rhys' 3D printed and laser cut flow through toxicity test chambers containing *Allorchestes compressa*. The novel design contains flow through ports on the left and right side and a metal grubscrew which is the loading port.

Regional Reports

Victoria



Victorian SETAC Members Seminar and Networking Event – Wednesday, 2nd April 2014

Victorian SETAC members were fortunate to have visiting Professor Donald Baird present a seminar at the University of Melbourne during April. His seminar, entitled "Using DNA-based biodiversity observation in ecological risk assessment" was a thorough and fascinating talk describing two novel approaches to biomonitoring, namely next-generation sequencing of environmental DNA and satellite/low-elevation LiDAR & hyperspectral remote sensing platforms. Using data from his ongoing study of the world's largest inland freshwater delta (the Peace-Athabasca Delta), Donald discussed the various merits and challenges of these new technologies, in the context of environmental risk assessment and dealing with complex and multiple environmental stressors. The seminar was followed by a networking lunch, where current and prospective SETAC-AU members could mingle and discuss all things related to their ecotox research, as well as have a yarn with Donald about his work. The event was well attended by current Victorian members and we also managed to sign up a few new ones!

A special thanks to SETAC Council for supporting the event and assisting with Donald's travel expenses.

Professor Donald Baird presenting at the University of Melbourne

Victorian members of SETAC Au networking

Kathryn Hassell (khassell@unimelb.edu.au)
Victoria Regional Representative

Regional Reports

Northern Territory

Environmental Research Institute of the Supervising Scientist (ERISS) by all the Ecotox team.

The Ecotox team at ERISS has seen some changes since our last Endpoint update. Kim Cheng has left the group in search of new adventures and is now in Melbourne researching "top secret" banknote substrates. Tom Mooney joined the team in Januray as the new laboratory manager. He was fresh from finishing his PhD at the Antartic Division and has taken no time settling into his new role, which requires juggling research and day-to-day lab management. We've convinced Ceiwen Pease to loan us her skills a little longer while she finishes her PhD writing and finds a deserving post-doc position. Claire Costello also returned to the team in January and is working part-time, which allows her more time with her growing family.

Tom and Mark setting up a croc exclusion net at Gulungul billabong

Ammonia continues to be the key toxicant of focus for the ERISS team because water quality guidelines are needed for current operations and closure criteria. The toxicity of ammonia is highly dependent on the pH of the water, which poses a challenge when using the poorly buffered, very soft waters of Magela Creek as a diluent. To combat this, pH buffering techniques were examined and the use of CO_2 was determined to be the best choice. We are now conducting tests in airtight chambers and increasing the CO_2 concentration to an atmospheric concentration that controls the water's pH. Toxicity testing is well underway using local species and toxicity estimates have been successfully derived for the green hydra, *Hydra viridissima*, the micro algae, *Chlorella* sp. and the fish species, *Mogurnda mogurnda*. Testing is currently underway on our and snail species, *Ameriana cumingi*, but yet to commence on the duckweed species, *Lemna aequinoctialis* and the cladoceran, *Moinodaphnia macleayi*. Tom will present our recent method developments and the toxicity tests completed to-date at the Adelaide conference.

Setting up the pop-nets in the croc exclusion zone

We are continuing trials to understand the fermented component of our cladoceran diet with the aim of developing a food ration that promotes better flea performance and has minimal interaction with the substances being tested. The algal component of the flea's diet has also recently been optimised providing better pH control during testing. Alicia will present the findings of this work at the Adelaide conference. A revision of the site-specific trigger value (TV) for U in Magela Creek is approaching completion. The revision includes the ability to correct the TV for dissolved organic carbon. However, prior to completing this project, we will be undertaking some 14-d

Tom on croc watch

chronic toxicity testing for the snail, *Amerianna cumingi*, to firm up our chronic toxicity value for this species. The site-specific TV for U in sediments is also progressing and we are currently looking at the ecogenomic datasets and how best to use this information to derive a TV. This sediment work is continuing with Macquarie University (MU)-funded PhD project being conducted by Brodie Sutcliff. She will look at the effects of U on the structure and function of bacteria communities and the project will include the latest metagenomic techniques as well as stable isotope probing of the bacteria populations. The project is a collaboration between ERISS, MU and CSIRO and Brodie's supervisors are Anthony Chariton, Grant Hose, David Midgley, Ian Paulsen and Andrew Harford.

In July Tom and Ceiwen went out to Kakadu National Park and braved the crocs to help with a large-scale survey of the billabongs in the Alligator Rivers Region. This survey is performed every two years as part of the recessional flow monitoring for the Ranger uranium mine. At each billabong pop-nets were used to capture the diversity and abundance of small fish that use the nearshore vegetation as habitat as well as the type of vegetation at each billabong. It was a great couple of days experiencing different side of the work that is done at the Supervising Scientist.

Australian Institute of Marine Science (AIMS)
by Joost van Dam

There have been busy times in the AIMS Darwin aquaria. Our joint ecotox program, involving partners AIMS, ERISS and Charles Darwin University, is currently developing a suite of chronic test methods targeting regionally relevant tropical marine biota. After some teething issues in the first year, we're now in full flight. Following successful adoption of a bioassay using the tropical microalga, *Isochrysis galbana*, effects of several metals were tested over a range of temperatures. With the microalgae completed, focus has shifted on test development using larval stages of various 'larger' species, including clownfish, hermit crabs, marine snails, giant clams and barnacles. Some of these larvae are barely visible, and most are delicate on top of being fussy eaters, easily filling the project team's Jug of Challenges. The 2013-2014 wet season saw lots of exciting activity in the fish and crab departments, yielding some interesting results; however since the dry season kicked-in our broodstock have been lying low, despite undisclosed efforts to induce out-of-season spawnings. On the bright side, the snails and barnacles have proven more reliable in that we've established protocols to trigger spawning and produce broods year-round; for these species assay development is reaching the point where soon, we can commence testing. In our ever-optimistic views we'll be releasing some exciting data before the end of the year!

12-day old stage II veliger of *Nassarius dorsatus*, flicking its foot in search of proper settlement substrate

Amphibalanus amphitrite broodstock, ready to be spawned

Andrew Harford (Andrew.Harford@environment.gov.au)
Tasmania Regional Representative

Regional Reports

Queensland

Smart Water Research Centre (Griffith University) by Fred Leusch, Peta Neale, Jason van de Merwe, Steven Melvin and Erik Prochazka

Hello from the Smart Water Research Centre on the Griffith University Gold Coast Campus! 2014 has been a busy year so far for the Water Quality and Diagnostics group...

Phil Scott submitted his draft PhD Thesis 'Investigation of endocrine disruption in Australian aquatic environments' in May and returned to Canada where he is now lying low waiting for the reviewer comments ... and enjoying a well-deserved rest until then. Two of the papers from his PhD have recently been accepted for publication and can be found in Environ Sci Poll Res (doi 10.1007/s11356-014-3235-7) and in J Environ Qual (doi 10.2134/jeq2014.01.0012). Two more coming soon!

Peta Neale officially joined the group as a research fellow in June and will mainly work on the European Union project SOLUTIONS, which aims to identify and prioritise current and emerging aquatic pollutants with a specific focus on the Danube and Rhine rivers. **Shima Ziajahromi** has recently started her PhD with Fred and Peta and will be working on microplastics in wastewater with a particular emphasis on their effect on chemical fate and toxicity.

Jason van de Merwe, who joined as a research fellow last year, has been working on several projects, splitting his time between modelling stormwater contaminants, adapting a bacterial toxicity assay to high throughput format, and looking at development of several animal cell lines for in vitro testing.

Nicole Knight is back from maternity leave and is back as a part-time research fellow. She is wrapping up a few publications from her previous work on disinfection by-products and preparing grants for the upcoming rounds - stay tuned for more! Her student **Kalinda Watson** is in the last stretch of her PhD on 'Regulated and emerging disinfection by-products in drinking water; occurrence, transformation and removal strategies', and hopes to submit before the end of the year.

Honorary member of the group CQU postdoc fellow **Steven Melvin** has been spending a lot of time in the wet lab establishing a range of sensitive behavioural testing for fish and Daphnia and is now applying these tests to explore the effect of a range of different chemicals. Also honorary group member from CQU, **Chantal Lanctôt** is almost half-way through her PhD looking at the effect of coal mine water releases on aquatic biota using a combination of chemical analysis, in vitro bioassays, classical toxicity testing and rapid behavioural assays. Chantal is supervised by Scott Wilson (CQU), Larelle Fabbro (CQU), Steve and Fred.

Since our last Endpoint report, **Erik Prochazka** decided to stop working as an RA ... and start his PhD! He is now a little over a third of the way through his project, looking at combining toxicogenomic methods and in vitro assays to (hopefully) identify novel genes and pathways affected by chlorination disinfection by-products. His supervisors are Fred, Nicole Knight (GU), Beate Escher (Helmholtz Centre for Environmental Research - UFZ) and Michael Plewa (University of Illinois).

Griffith University students **Olivia King** and **Alfred Joly** are currently undertaking their honours projects at the centre. Olivia is looking at synthetic hormones, including good old ethinylestradiol but also new kid on the block levonorgestrel, in wastewater and the receiving environment. She is supervised by Fred, Jason, Anthony Carroll (GU) and Frederieke Kroon

(AIMS). Alfred is looking at the timelines of vitellogenin mRNA and protein levels responses in mosquitofish, and is supervised by Fred, Steve and Joe Lee (GU).

Together with Sharon Hook (CSIRO) and Frederieke Kroon (AIMS), Fred is putting together a list (which eventually will become an online endnote library, or something like that) of researchers interested in collaborating on endocrine disruption in Australia and their publications. If that's you, please get in touch with one of us!

That's us in a nutshell - we look forward to seeing you at SETAC in Adelaide next month!

Vision Environment (QLD) by Leonie Andersen, Ralph Alquezar and Felicity Melville (SETAC members)

We have just commenced a large project for the Gladstone Channel Duplication EIS. VEQ is undertaking the water quality and marine ecology aspects of the EIS for the dredging project which is to create a second channel into the harbour for vessel traffic. Our sensitive habitats are coral reef and seagrass. Typically water quality for an EIS includes telemetered dataloggers for physchem and telemetered benthic PAR (light) in addition to traditional grab sampling. The marine ecology aspect can include habitat mapping for substrate and coral communities as well as macrobenthic sampling, and fish surveys using stereo BRUVS.

We are now using new instrumentation for the continuous measurement of sedimentation rates in selected projects. These instruments act like a side scan sonar and calculate the net flux of sediment deposition and resuspension. Potentially compliance trigger values could be developed for sedimentation rates from the data for future dredge projects.

As part of a self-funded research initiative, VEQ are undertaking coral shading studies to determine the light requirement for local coral species which will hopefully translate into a light based management approach for coral protection during future dredge projects, similar to how seagrass was managed in the previous large dredge project in Gladstone.

Coral shards ready for transplanting

Vision diver undertaking coral health check

Erik Prochazka (e.prochazka@griffith.edu.au)
Queensland Regional Representative

Student Profiles

Frances Alexander

Name: Frances Alexander (Frances.Alexander@aad.gov.au)

Degree: Doctor of Philosophy

Supervisors: Professor Peter Harrison, Dr Catherine King, Dr Amanda Reichelt-Brushett, Dr Alison Lane.

Institutions: Southern Cross University and the Australian Antarctic Division

Estimated time of completion: 2015/2016

Thesis topic: Assessing the toxicity of physically and chemically dispersed fuels to Antarctic marine invertebrates.

Frances Alexander in the Antarctic

How did you get involved in ecotoxicological research?

Like so many biologists, I was interested in the environment at an early age. I grew up in North Queensland, which is an amazing place from a biological point of view being close to the reef, rainforest and outback, and as the daughter of a biologist, I developed a strong appreciation for it. I completed a Bachelor of Science with Honours in zoology at James Cook University in North Queensland. While I loved zoology, I felt I needed to broaden my horizons and skills in an increasingly competitive workforce. I did a Masters by coursework in Environmental Science at the University of Melbourne and subsequently worked as a research assistant at the University of Melbourne and Monash University. I worked on some very interesting projects, which rekindled my enthusiasm for research and many people that I worked with and for inspired me to pursue a PhD. One project that I particularly enjoyed working on had an ecotoxicological focus. I liked ecotoxicology as it combined my interests in zoology and protection of the environment, so when a PhD in ecotoxicology arose, I jumped at the chance. Ecotoxicology is a relatively new field for me, as a tropical terrestrial zoologist, working on marine invertebrates in Antarctica is outside my area of expertise, but I wanted a challenge and saw it as an opportunity to learn something new.

What led you to your PhD project and what's the importance of your work?

I found my PhD project purely by accident. As I began to consider a PhD more seriously, I spoke to a contact about his thoughts on undertaking one. Towards the end of the conversation he mentioned that he was looking for a new PhD student for an ecotoxicological project working in Antarctica. The project was interesting to me from a scientific point of view, but also offered a seemingly rare opportunity to take a proactive approach to protecting the environment. Luckily my supervisors were also interested in me, and a few short weeks later I was a PhD student.

My project is looking at the use of chemical dispersants as a potential management option for marine fuel spills in Antarctica. The risk of fuel spills in Antarctic waters is increasingly likely with the rise in shipping associated with tourism and research activities, both of which require and transport large quantities of fuel. While fuel dispersants aren't currently used in the

management of fuel spills in Antarctica, there is a need for scientifically robust advice on their use in Antarctic waters. At present, little is known regarding the effects of fuel dispersants on Antarctic biota. This lack of data prevents the determination of effective options for the management of even moderate scale fuel spills. The goal of my PhD is to assess the potential biological impacts of dispersed and weathered fuels on Antarctic marine invertebrates. To achieve this I am conducting toxicity tests on a range of marine invertebrates by exposing them to dispersed and weathered water accommodated fractions (WAFs) of a range of fuels commonly used in Antarctica from light SAB diesel to heavy marine grade oil. The data I collect will assist in the development of effective fuel spill contingency plans to better manage environmental pollution resulting from fuel spills in Antarctic waters.

What experimental work have you undertaken so far?
I've been lucky enough to have two field seasons in Antarctica already. I spent the 2012/2013 summer season at Davis Station as soon as I started my PhD. At Davis I conducted experiments investigating the toxicity of the water accommodated fraction of fuels to two common Antarctic marine copepods, the planktonic *Paralabidocera antarctica* and a benthic harpactacoid copepod (yet to be identified). I recently returned from another trip to Casey Station, Antarctica, where I led a team of researchers conducting similar experiments on Antarctic marine copepods *Paramoera walkeri* and marine nemertean worms (yet to be identified). I've also conducted experiments at the Australian Antarctic Division's Marine Research Facility using a species of amphipod (yet to be identified) and the microgastropod *Skenella paludinoides*.

Where to from here with your work?
My team and I collected a large number of marine invertebrates over the summer which I maintain at the Antarctic Division's cold water aquarium, so I intend to start some more experimental work with these animals shortly. I'm also hoping to start writing some papers soon once my samples have been analysed.

What are your plans for the future?
At this stage my main focus is to complete my PhD. I haven't decided what direction to take after I finish but I still have a few years to think about it.

Frances Alexander's team in the Antarctic

Student Profiles

Josh King

Name: Josh King (josh.king@csiro.au)

Degree: Bachelor of Environmental Chemistry Advanced Honours

Institutes: University of Wollongong and CSIRO Land and Water (Lucas Heights)

Supervisors: Assoc. Prof. Dianne Jolley, Dr. Simon Apte, and Mr Chad Jarolimek

Thesis title: Ultra-trace determination of Al and Ga in marine waters

How did you get into environmental chemistry?
My interest in chemistry was sparked by my high school chemistry teacher and from there, I have been fortunate enough to be able to follow this interest through my undergraduate and honours studies. Initially I started studying for a nanotechnology degree, but after the first year switched to Environmental Science. Studying second and third year analytical and environmental chemistry subjects really peaked my interest in environmental chemistry and in particular the analytical methods used in environmental chemistry. Halfway through my degree I took a year off to work at CSIRO Land and Water (in Sydney) as a Laboratory Support Officer in the Analytical Chemistry team, and after the first week, knew that this was something I could see myself doing as a career. I was subsequently offered the opportunity to work at CSIRO on a part time basis while I finished my studies and completed my honours, and am happy to say have been here ever since!

How did your honours project come about and what did it entail?
In December of 2011, CSIRO undertook a three day survey of the waters and sediments in Port Curtis, Gladstone, Queensland to determine metal concentrations in the harbour, in response to recent concerns about the impact of dredging. As a result of this and other routine monitoring studies, Al was found to

Josh King in the lab (photo by Mr Chad Jarolimek)

be present at concentrations above the current Environmental Concern Level (ECL) at a number of locations, but below the detection limit at others. The problem was that the detection limits of the methods used in those studies were anywhere from 2 -20 times higher than the current ECL. So there was a clear need to be able to measure Al concentrations, with a high level of confidence and gain important information on the typical concentrations of Al in coastal marine waters. Ga was also examined due to its similar chemistry, and being found in the same ores as Al (e.g. bauxite). After many months discovering how challenging method development can be, I was able to optimise a solid phase extraction (SPE) pre-concentration/matrix removal method capable of quantifying both

Student Profiles

Josh King

Al and Ga in the ng/L (parts per trillion) range, and then apply this new method to NSW coastal waters.

What do you hope to achieve with your research?
When time has permitted, I have been in the process of applying this newly developed method to more coastal marine waters, to build up an extensive dataset on dissolved Al and Ga concentrations, with the aim of getting my results published sometime in the near future. I also hope to be able to adapt my method to pre-concentrate other metals from marine waters simultaneously, including the "Super 6" of Cd, Co, Cu, Ni, Pb and Zn. This could potentially result in more efficient ultra-trace analysis of these elements, and reduce the dependency on time and labour intensive solvent extraction techniques.

What are your plans for the future?
My immediate research goal is to turn my honours research into a research publication. Outside of work life, I'm looking forward to doing all those things that full-time study puts on hold: doing some travelling, marrying my fiancé, and begrudgingly paying off that HECS debt!

Science Meets Parliament 2014

Delegates' Report

We, Andrew Harford and Peta Neale, attended Science meets Parliament 2014 on behalf of SETAC AU. Science meets Parliament is a two day event organised by Science & Technology Australia that brings together 200 scientists from all over Australia to meet with parliamentarians, policy makers and the media.

The first day was full of presentations to prepare us for our meetings with parliamentarians on the next day. The MCs for the day were Ross Smith (STA President) and Emma Johnston (STA Vice President) and it was great to see two SETAC-AU members running the main show. It started with Opposition Leader Bill Shorten who asked us to change 1% of our work to become more political.

Simon Frances from the Australian government initiative "Inspiring Australia" talked about how they can help us communicate our science better. One of their key activities is National Science Week but they also provide services such as media training for scientists.

Lyndal Curtis (ABC News 24) and James Massola (Fairfax Media) discussed how the media cycle works and what makes something newsworthy. Suggested avenues of media exposure for our research included local media and websites such as 'The Conversation'.

Dr Subho Banerjee (Deputy Secretary of Science, Research and Skills, Department of Industry), took us on a tour through the "policy factory", which was compared to Willy Wonka's chocolate factory (no free chocolate unfortunately). He emphasised that understanding the policy cycle, which consists of anticipation, formation, consultation, adoption and evaluation, is essential if we want our research to impact policy decisions.

Dr Inger Mewburn, AKA the Thesis Whisperer, gave us tips on how to use Twitter like a pro. She really showed us how to use Twitter creatively by tweeting links to additional resources while she gave the presentation. One key suggestion was what she called the 'DJ approach' which is to pick a main topic and a couple of side topics to tweet about, with about 70% of posts about the main topic. If you are a tweeter, you can use #smp2014 find some key quotes and audience remarks produced throughout the conference as well as resources that were shared by participants.

Martin Laverty (Catholic Health Australia), Gary Dawson (Australian Food and Grocery Council), Simon Banks (Hawker Britton Public Affairs Solutions) and Paul Chamberlin (Endeavour Consulting) gave a play about the art of the perfect political meeting. We learnt that you should present solutions when meeting with parliamentarians and, where possible, speak with a single voice to maximise exposure of your issue.

Drs Rod Lamberts and Will Grant (ANU) gave us some tips about science communication and then we were asked to present a 60 second pitch of our research in general terms with our table. Many people found this exercise really useful and it was good practice for our meetings with parliamentarians.

Profs Hugh White and Will Steffen discussed raising the standard of the climate "debate", highlighting that within the scientific community there is the debate portrayed by some. This also led to them talking about their experiences of entering the policy-making arena, of which they both expressed no regrets when asked directly.

The gala dinner was held in the evening with ABC's Science Show host Robyn Williams as MC. The guest speakers included Dr Kia Wallwork (ANSTO), Prof Christine Bennett (University of

Science Meets Parliament 2014

Delegates' Report Continued

Notre Dame), the Hon Ian Macfarlane MP and the Hon Bill Shorten MP. Parliamentary Friends of Science was also relaunched with Karen Andrews MP and the Hon Richard Marles MP. Christine Bennett spoke about why science is important to Australia and why the government should support science. Bill Shorten spoke about how early career researchers should not have to choose between a mortgage and a career in science, which resonated with a lot of the attendees.

The second day began with a breakfast forum at Parliament House with Prof Aidan Byrne, CEO of the Australian Research Council (ARC). He emphasised that scientists need to communicate their research in a way that can be easily understood if they want ARC funding. He also answered many questions about the ARC process and gave some interesting insights into the ARC. After breakfast

Senator Kim Carr, who has attended all 14 Science meets Parliaments, spoke to us about science and technology being at the cutting edge of social change and the need for greater investment in innovation. He also touched on the current anti-science attitude in much of the Australian media.

During the second day all delegates had the opportunity to meet with parliamentarians. Peta met with South Australian Labour MP Tony Zappia and discussed the capabilities of SETAC AU, as well as water quality issues. He was familiar with stormwater re-use from his time as Mayor of Salisbury and asked several questions. While a bit nerve racking, it was a great experience to discuss research with a parliamentarian. Andrew met with Western Australian MP Ken Wyatt and also discussed SETAC-AU capabilities as well as his work with the Supervising Scientist Division. Mr Wyatt gave ample time to casually discuss our science and the challenges the science sector faces more generally. He was quietly spoken and asked very intelligent questions, also claiming that he reads New Scientist cover-to-cover.

Lunch on the second day was held at the National Press Club with a presentation by the Chief Scientist, Ian Chubb. He spoke of the need for a more strategic approach to science policy claiming that the current science policy was "like having a jigsaw puzzle when you've lost the top of the box". He is passionate about the need to provide jobs for young scientists claiming that many are doing 4 or 5 postdocs before landing their first permanent job. He spoke about the need for evidence to outweigh opinion. He was also not coy during questions when he was clearly baited by the media to side with the opposition leader. He bluntly stated that "He was right" in relation to the future direction of science in Australia. A full transcript of his speech can be found here. Peta attended Question Time which was an interesting experience! Unfortunately, no questions about science in Australia or levels of funding were raised during Question Time, but it certainly was entertaining, with lots of shouting and at least three parliamentarians kicked out of the chamber.

Towards the end of Day 2, Prof Robin Grime spoke about his role as Chief Scientific Advisor in the UK's Foreign Office and also of his role as a teaching academic. One of his first comments was that his job in the Foreign Office was nothing like Q from the James Bond movies. The UK has about 20 Chief Scientific Advisors in various Departments and they provide scientific guidance to their Secretaries and Ministers. He spoke of some interesting issues such as the legal liabilities of UK scientists providing advice to foreign countries.

Science meets Parliament concluded with drinks with the Greens, where Adam Bandt MP launched the Greens' Respect Research campaign, to maintain (and hopefully lift) Government funding for research. Other Greens' parliamentarians including Senators Christine Milne and

Science Meets Parliament 2014

Delegates' Report Continued

Sarah Hanson-Young were in attendance.

Overall, Science meets Parliament was a really interesting and insightful experience and we would recommend attending if you have the opportunity in the future.

Andrew Harford (andrew.harford@environment.gov.au) and **Peta** (p.neale@uq.edu.au)
SmP Delegates

Science and Technology Australia's President (and SETAC Asia Pacific Vice President) Ross Smith opens Science meets Parliament2014 (photo by Lorna Sims)

Peta and Andrew with Ross Smith (photo by Lorna Sims)

Science and Technology Australia's Vice President Emma Johnston (photo by Lorna Sims)

Australia's Chief Scientist, Ian Chubb, at the National Press Club (photo by Lorna Sims)

SETAC Asia Pacific and SETAC Australasia (ASE) Conference 2014

If you have not registered, you can register at http://www.setac2014.com.au/registration.html You have the option to register without payment and we will invoice you or you can pay by credit card or electronic bank transfer.

The 9th SETAC Asia/Pacific 2014 Conference program is now available for download at http://www.setac2014.com.au/

The 9th SETAC Asia/Pacific 2014 Conference will provide a rich mixture of international and local speakers and in-depth educational offerings. With nearly 400 oral and poster presentations and delegates from 26 countries, there will be plenty of opportunity to meet colleagues, to discuss ideas, to expand your network and share experiences.

I trust you will give consideration to joining your colleagues at the 9th SETAC Asia/Pacific 2014 Conference.

Plevin and Associates Pty Ltd
SETAC 2014 Conference Manager

What's Happening?

Conferences and Workshops

If you are aware of critical dates conferences or workshops that would be of interest to other members of SETAC – AU please email the details to the EndPoint Editor david.everett@ehp.qld.gov.au.

Please include a link to the Webpage for the event and the critical dates SETAC – AU members should be aware of.

SETAC AP/AU 2014 Conference
Adelaide, Australia
14 – 17 September 2014
Call for abstracts close: closed
Notification of acceptance: closed
Author registration close: closed
Early bird registration close: closed
http://www.setac2014.com.au/cfp.html

1st Central and West African SETAC Regional Conference
Garki, Abuja, Nigeria
26 – 30 October 2014
Abstract submission closes: 20 Aug 14
Early bird registration: 20 Aug to 15 Sep 14
Late registration 16 Sep to 15 Oct 14
Review of abstracts: 1 – 20 Aug 14
Notification of acceptance: 30 Aug 14
Onsite registration after: 15 Oct 14
http://c.ymcdn.com/sites/www.setac.org/resource/resmgr/Meetings/SETAC_Africa_flyer_20062014.pdf

SETAC North America 35th Annual Meeting
Vancouver, Canada
9 – 13 November 2014
Abstract submission opens: closed
Training course proposals: closed
Registration opens: closed
Early bird registration close: closed
Pre-registration deadline: 19 Sep 14
Online registration close: 22 Oct 14
http://vancouver.setac.org/?page_id=26

raci National Congress
Adelaide, Australia
7 – 12 December 2014
Abstract booking deadline: closed
Notification of acceptance: closed
Early bird registration: closed
Accom booking registration: 30 Sep 14
http://racicongress.com/

SETAC Europe 25th Annual Meeting
Barcelona, Catalonia, Spain
3 – 7 May 2015
Key dates: to be advised
http://barcelona.setac.eu/?contentid=767

Student Publications

If you have recently conferred your thesis or are a current student that has published a paper, let our editor know, david.everett@ehp.qld.gov.au, so that we can share your success and let everyone else know.

Please include a full reference to your thesis or publication and details of the institution you were/are enrolled at.

Jeppe, Katherine, J., Carew, M.E., Long, S, Lee, S.F., Pettigrove, V. and Hoffman, A.A. (in press) Genes involved in cysteine metabolism of Chironomus tepperi are regulated differently by copper and by cadmium, *Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology.*

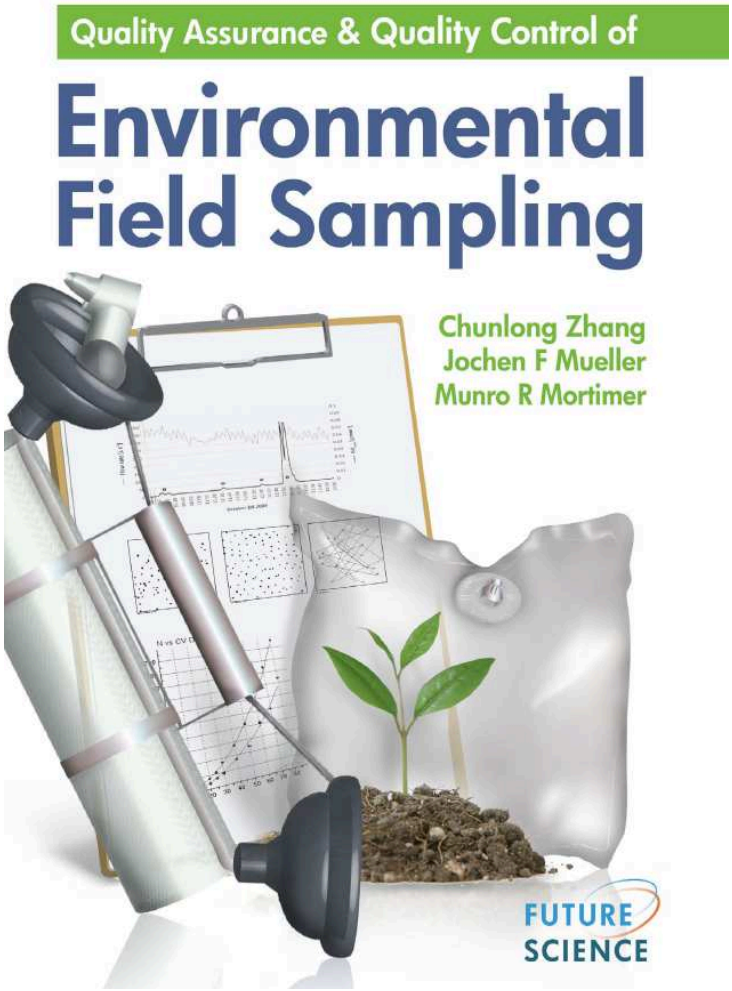
Sun, Melanie, Y., Dafforn, K.A., Johnston, E.L. and Brown, M.V. (2013) Core sediment bacteria drive community response to anthropogenic contamination over multiple environmental gradients. *Environmental Microbiology* **15**: 2517-2531.

Yeh, R.Y.L., Farré, M.J., Stalter, D., Tang, J.Y.M., Molendijk, J., and Escher, B.I. Bioanalytical and Chemical Evaluation of Disinfection By-Products in Swimming Pool Water. Water Research (2014), DOI:10.1016/j.watres.2014.04.002.

Member Publications

NEW PUBLICATION –
in the field of Environmental Field Sampling methodology.

Announcing the publication in eBook format of - *Quality Assurance & Quality Control of Environmental Field Sampling* available for purchase at a substantially discounted rate.



This book of 240 pages and 10 chapters, authored by a team of expert environmental sampling practitioners, highlights quality issues in the taking of environmental samples rather than quality issues in laboratory analysis of sampled material.

Numerous publications address quality issues in laboratory analysis, but quality issues related to the taking and handling of samples are commonly unrecognized, underestimated or ignored by environmental professionals involved in the chain of data acquisition, analysis and use.

This new publication aims to redress that knowledge and skills gap.

Full details of the eBook contents and free downloads of the foreword and chapter summaries are available at:
http://www.futuremedicine.com/doi/book/10.4155/9781909453043

To purchase a copy go to:
http://www.future-science-group.com/shop/421/FS/263/
and enter the promotional code **SETAC50**

Australasian Bulletin of Ecotoxicology and Environmental Chemistry

Call for papers

We invite all SETAC AU members to submit new manuscripts to the *Australasian Bulletin of Ecotoxicology and Environmental Chemistry.* The *Bulletin* is a publication of the Australasian Chapter of the Society for Environmental Toxicology and Chemistry (SETAC AU), and is a regional publication dedicated to publishing original, scientifically-sound research dealing with all aspects of ecotoxicology and environmental chemistry relevant to Australasia. Papers published may be research reports, review papers, short communications, descriptions of new techniques and equipment, thesis abstracts, thesis literature reviews and comments on previously published papers.

All papers published in ABEEC will be made freely available through the website for SETAC AU. It will be an online publication only.

This is how the submission process works. Contributions should be submitted to the editor as a manuscript in the same manner as you would for any other journal. You also need to provide the name(s) of at least one reviewer to assess the manuscript. All manuscripts will be sent out for review by at least two experts in the field. After the review process, manuscripts will be sent back to authors for final revisions prior to online publication.

If you wish to submit a manuscript to *ABEEC* or would like to discuss publication of a manuscript, then please contact the editor. A copy of *Instructions to authors* is also available from the editor.

We look forward to receiving you manuscripts.

Reinier M Mann (reinier.mann@qld.gov.au)
Editor – *ABEEC*

ABEEC

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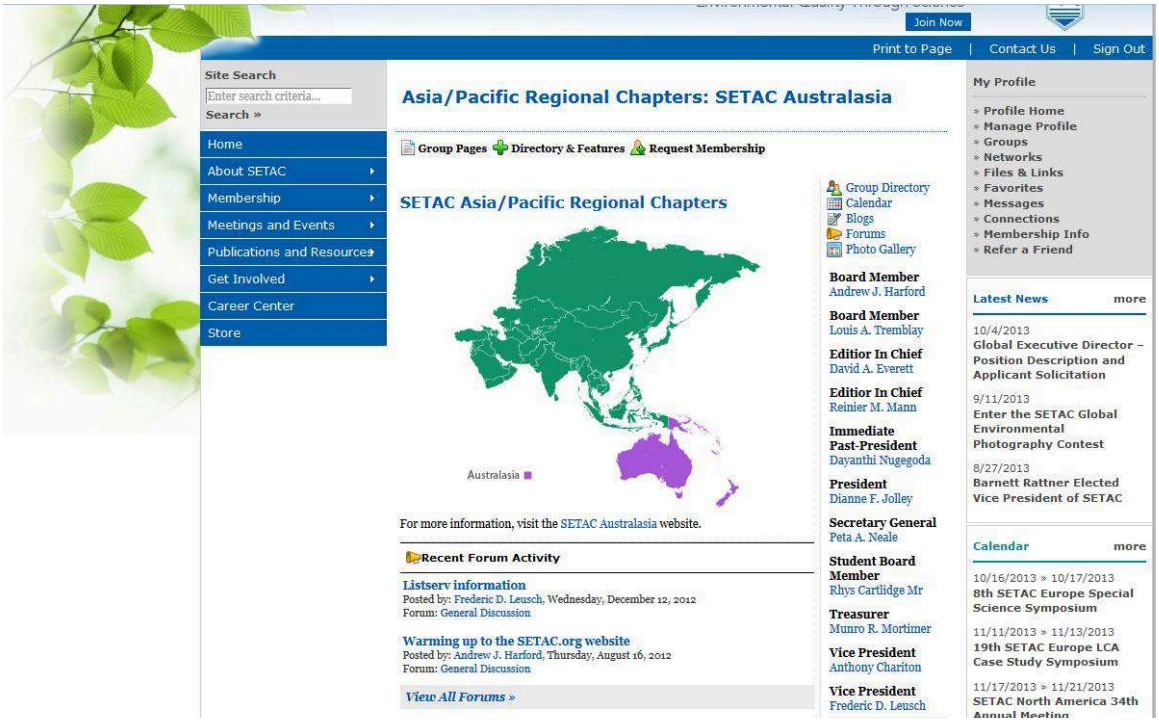
Membership Details

How to join SETAC Australasia

Even if you are a SETAC member based in Australia, New Zealand or PNG, you may not be a member of SETAC Australasia. You can join SETAC Australasia by going to http://www.setac.org/. After logging in, go to the SETAC Australasia page and click 'Request Membership' (see below). You can find this page by either searching 'Australasia' or going to the 'Get Involved' tab on the left of the page, then 'Regional Branches and Chapters', then 'Asia Pacific Chapters'. There are no additional fees attached to the SETAC Australasia chapter.



Current SETAC Australasia Members

To make sure you don't miss out on attending SETAC get-togethers in your state or territory or contributing your latest research to Endpoint, please update your SETAC profile to include your location so your regional rep can get in touch with you. You can do this by logging into http://www.setac.org/ and selecting 'Manage Profile', then 'Edit Bio'.

Peta Neale (p.neale@uq.edu.au)
SETAC AU Secretary

Affiliate and Sustaining Memberships

Have you considered affiliate or sustaining membership or do you know an organisation that should? Affiliate memberships are suitable for not-for-profit organisations or academic institutions and sustaining memberships are suitable for for-profit organisations, government agencies, or individuals. They are cost effective means of covering membership and conference registrations as well as other benefits. Here are the details below:

SETAC-AU Sustaining Member

- For-profit group, government agency or individual
- **AUD1650 GST inc**
- 2 free registrations or 4 free student registrations or 1 full and 2 student registrations
- Meeting signage and program
- Meeting receptions free
- Membership Directory access
- Journal -Hardcopy & online
- Access to online newsletter
- Annual acknowledgement in journals (SETAC AU publication)
- Free advertising
- Free Job adverts online
- Listing on SETAC AU web page
- Acknowledgment for other assis-

SETAC -AU Affiliate Member

- Non-profit group or academic institution
- **AUD880 GST inc**
- 1 free registration or 2 free student registrations
- Meeting signage and program
- Meeting receptions free
- Membership Directory access
- Journal –online
- Access to online newsletter
- Annual acknowledgement in journals (SETAC AU publication)
- Free advertising
- Free Job adverts online
- Listing on SETAC AU web page
- Acknowledgment for other assistance such as student grants etc.

To follow up with these membership options please email me at p.neale@uq.edu.au and also pass this information on to anyone or any organisation you think might be interested. Remember we now represent ecotoxicology and environmental chemistry.

Peta Neale (p.neale@uq.edu.au)
SETAC AU Secretary

SETAC AU

Council Members

Position/Region	Elected Member
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Immediate Past President	Dayanthi Nugegoda
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Australian Capital Territory	Gary Fan
New South Wales	Tom Cresswell
Northern Territory	Andrew Harford
Queensland	Erik Prochazka
South Australia	Mike Williams
Tasmania	Cath King
Victoria	Kathryn Hassell
Western Australia	Tristan Stringer
Papua New Guinea	Riall Gabuogi
New Zealand	Ajit Sarmah Kimberly Hageman