

TEMs Links



July 2004

VOLUME 5 ISSUE 2

CC's Corner

Dear All,

Another semester beckons on the TEM program. Hope you are all enjoying the cold and truly dry dry season, despite a rainfall 'anomaly' in May/June this year. Climate change perhaps? CSIRO has recently released climate change simulations and scenarios for northern Australia and the NT in particular. The NT Government's Greenhouse Unit commissioned this work to try and predict changes and likely impacts for this region. The average output from 8 models was used in the predications, with results fairly similar to the rest of Australia (and globally), a 2 to 5.8 deg C rise over next 100 years. Coastal areas will experience less change than inland although storm and cyclone events are expected to increase in intensity. The report is available at www.lpe.nt.gov.au/enviro/greenhouse/documents/default.htm#climatechange if anyone is interested.

Speaking of SE Asia, we have some growing interests there with Graduate Certificate student Philip Smith currently completing his program based in Hanoi, Vietnam. Last year Phil completed a BA majoring in Politics with a minor in Environmental Studies through the Adelaide University and late last year left for 6 months in Vietnam. Phil works with SNV (Netherlands Development Organisation) within the Income and Employment Generation portfolio. His specific focus is on the Rural Enterprise Promotion (REP) programme in the northern mountains of Vietnam. This involves developing market supply and demand of traditional agricultural products. We will feature Phil's work in the next TEMS Links and he will be coming to Darwin to continue with the MTEM course.

As yet another link to SE Asia, GCTEM graduate Marianne Damholdt is likely to complete her Masters degree (from University of Aarhus, Denmark) in Cambodia, working with a UN funded conservation group.

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TEMS LINKS

- *Aims to keep students of the Graduate Certificate, Graduate Diploma and Master of Tropical Environmental Management in touch with each other and with staff in the course*
- *Contributions from students and others are always welcome, and should be sent to*

TEMS Links

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CC'S Corner (continued)

Dr Penny Wurm is continuing her involvement with the Eastern Indonesia fire management research project <http://fireindon.ntu.edu.au> that I mentioned several newsletters ago. There have been recent visits to CDU from Indonesian staff, and in late June Penny made a trip herself to the collaborating university in Eastern Indonesia, the Satya Wacana Christian University (UKSW) (*see article*). Relevant units from the TEM program are to be provided to UKSW, including SBI507 Ecology and Management of Tropical Savannas and possibly SES501 Landscape Ecology and GIS. UKSW may modify components of the units to suit their local needs.



Recently, Dr Michael Douglas (CDU lecturer in SBI 506 Tropical Wetlands Management) was interviewed by ABC-TV for their 'Catalyst' science show on his work with Dr Samantha Setterfield on invasive grasses such as Gamba and Mission grass. These grasses appear to be spreading around the Top End fairly rapidly, especially over the last 2 years and the Tropical Savannas CRC has a research project examining the nature of potential impacts and possible methods of controlling these grasses. A lot of filming occurred in the field amongst these grassy weeds and I was working as an 'extra' on the shoot. I suspect it will be a spectacular show, some amazing footage of Gamba fires.

So plenty of activity going on and possible research opportunities for MTEM students on such projects,

Hope your coming semester goes well,

Regards,
Dr Lindsay Hutley
TEM Course Co-ordinator
Charles Darwin University

Above right: The Catalyst crew interview Dr Michael Douglas

Right: The spectacular results of setting Gamba grass alight—this fire was filmed by the Catalyst team

(Photos: Michael Douglas and Sam Setterfield)





Assoc. Prof. Mogens Nielsen and Ms Dorthe Birkmose amongst the mangroves in Darwin Harbour - thanks to their efforts we have an exchange program in environmental studies at CDU and Aarhus University, Denmark (Photo: Penny Wurm).

Farewell to 2004 Danish Exchange Students

We were pleased to welcome another three Danish exchange students to the TEM program in Semester 1 this year. Soren Faurby, Pernille Madsen and Janni Fries Linnebjerg are students at Aarhus University, who took the opportunity to study in the TEM program for one semester. Some of you may also remember Marianne Damholdt who paved the way for other Aarhus University students to study with us, in Semester 2 2003.

The exchange has come about thanks to the vision and efforts of Assoc. Prof. Mogens Nielsen and Ms Dorthe Birkmose who travel frequently to Darwin, researching mangrove ant ecology. Under the terms of a MoU between the two universities, students (in equal proportions) from the two universities may take one semester of study at the partner university, with no extra tuition fees, and receive credit towards their award at their home institution. To date the program has included senior degree level students from CDU taking part in the innovative Environmental Studies Program at Aarhus (<http://www.environmentalstudies.au.dk/>), and postgraduate students from Aarhus undertaking units in TEM.

It was a pleasure to have you in the TEM program, Soren, Pernille, and Janni, and all the best with your future studies - keep in touch.

Student Profile—Janelle Fisher

Growing up in Darwin provided me with many experiences of the natural world in the Top End, for which I have developed a deep love and respect. However my interests in human health led me to pursue a profession in allied health, as an Occupational Therapist (OT). When considering post-graduate study it was only natural for me to want to integrate my health and environmental interests.

The OT philosophy views human health and well-being holistically, with the environment an important component. The immediate environment (ie. indoors) is often of greater relevance in the clinical setting, however I believe there is an increasing need to better understand the relationship between the health and well-being of humans and that of the environment. So in 2003, with a great deal of enthusiasm and imagination, I commenced the Masters in Tropical Environmental Management. The value of this path has only grown more and more since I took the first step!



I completed the course work (full time) in 2003. It required a great deal of commitment to manage the workload, but was a worthwhile time of learning. I am now spending 2004 undertaking the research component (part-time). My research, the Darwin Pollen and Hayfever Study, represents the culmination of health and environmental disciplines. It aims to provide new information about the types of pollens present in the Darwin area and their impact on hayfever. It is part of the larger Darwin Smoke Project, which incorporates the Darwin Asthma Study. It is exciting to be part of such a large study and I am privileged to have Dr Fay Johnston as my supervisor.

The aerobiology over Darwin and Palmerston is being measured daily with Burkard Sporewatch Counters, providing a quantitative measure of spores and the ability to identify predominant species. Hayfever levels in the Darwin population are being monitored through the sales of hayfever products at local pharmacies and consultations with General Practitioners. I will soon have the delightful duty of describing the relationship between pollen, smoke and hayfever from the various avenues and seemingly copious amounts (at this stage anyway) of data.



I have learnt so much since I began the first assignment on the seasonality of tropical savannas (a familiar task for many of you I imagine)!! The experience of studying has been enriching both personally and professionally and is a challenge I would highly recommend.

Acacia dunnii—a beautiful source of pollen

Graduate Update—Siobhán Denniss

I have been employed as a Natural Resource Planner for the last 6-7 weeks and I have been told that I have the contract until the end of the year! It is very exciting I have been enjoying the job so far - lots to do with basically no time to do it. The job entails writing the Integrated Natural Resource Management Plan for the NT and out of it comes an investment strategy for the NHT2 money. I am working with Robyn Delaney, the Project Manager, and Ingrid Chudleigh, the Coastal and Marine Planner, plus liaising with a host of NR facilitators, so it is a very interesting and diverse job. It is going to be a real challenge but I am excited about it.

Graduate Update—Sandra Pidsley

I graduated with a Graduate Certificate in Tropical Environmental Management in October, 2003. I just want to say that I thought the contents of the TEM program to be really interesting and relevant to current issues facing the NT. I have been fortunate to obtain employment, where I can use the skills I gained through the TEM study.

I am presently employed as an Environmental Assessment Officer (Coastal & Marine) for the Office of Environment and Heritage, which is part of the Department of Infrastructure Planning and Environment. This is a contract position till September as the 'owner' of the position is currently on maternity leave.

The job involves assessing new developments and determining their potential level of environmental impact. We have an *NT Environmental Assessment Act*, which covers this process, and if there are sufficient environmental concerns then we may recommend formal assessment of the development. Formal assessment may take two forms, either a Public Environmental Report (PER) or an Environmental Impact Statement (EIS). In general, a PER is recommended on the basis of several environmental concerns, whereas an EIS covers a development which has many environmental issues and the potential for significant impact to the development area. Even if formal assessment is not recommended, developers may be asked to provide an Environmental Management Plan (EMP). These plans outline ongoing commitments by the



Aquaculture ponds are aerated to maintain the Biological Oxygen Demand (BOD) levels

company to manage environmental issues associated with the development.

The majority of developments I assess are aquaculture projects, which have the potential to impact on the coastal and /or marine environment. Aquaculture involves the farming of species such as prawns, barramundi, crabs, crayfish and pearl oysters.

Environmental issues associated with these developments include:

- Clearing of vegetation, both terrestrial as well as mangrove species
- Disturbance of mangrove mud and the potential for acid sulphate soil leachate
- Potential impacts to estuarine ecosystems due to change in water quality and increased nutrient levels of discharge waters.
- Regulations control the volume and quality for intake as well as discharge water.
- Risk of disease from aquaculture species spreading to natural population
- Introduction of weed species
- Creation of breeding sites for mosquitoes and other biting insects due to altered hydrological conditions
- Waste management

I am really enjoying this work and find it challenging!

Aerial Photo of an NT Prawn Farm

Do you want to tell your story?

All of our students have interesting backgrounds and entertaining/instructive/informative /uplifting tales to tell of their past and present lives. If you would like to share them with fellow students in the next edition of TEMSLinks, please contact Lynda on Lynda.prior@cdu.edu.au

STUDENT PROFILE— JUSTIN PERRY

Hello everyone! My name is Justin Perry and I have one subject to go in the MTEM before I start a project, which I'll hopefully devise next semester. Aside from study, which takes up most of my spare time, I work as a ranger with the Parks and Wildlife Service of the NT, so what does that entail.....

“I know you're a ranger... but what do you do?” This is a question that's posed to me quite regularly by visitors and friends alike. It is very difficult to compress the myriad of tasks undertaken into a routine range of duties and most often I respond with; “it depends what's going on”. Every park I have worked in has been different, each with their good points and bad points, below I have written a bit of a story with some anecdotes from my working life.

I have worked in a number of different National Parks and Reserves since I moved to the Northern Territory six years ago. I started my career in the desert at Finke Gorge National Park, which is located about 130 km south-west of Alice Springs and is better known as Palm Valley. After a couple of months of hand pulling buffel grass and conducting campfire talks I was shifted to Ormiston Gorge (130km west of Alice Springs) in the West MacDonnell Ranges National Park. This was a high visitation park with some extremely beautiful natural features including the towering cliff faces of Ormiston Gorge (and a pub only 15 km away at Glen Helen Gorge).

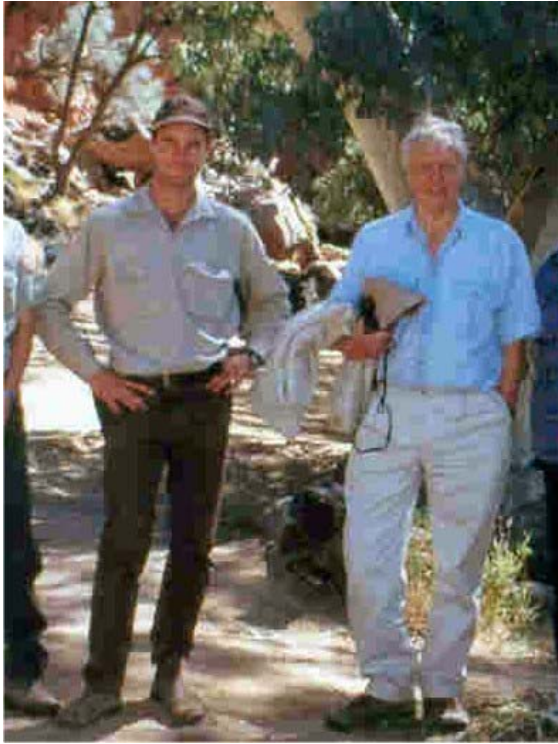
Working in the West Macs was very diverse and ranged from very mundane daily tasks to exciting once off experiences such as being involved with a joint muster to remove cattle from the park.

It's the exciting once off's and unexpected adventures that make the menial tasks, such as mowing and cleaning toilets, acceptable. When I was working at Ormiston Gorge I assisted with the preliminary work and subsequent filming of Western Bower Birds for David Attenborough's documentary “Flying Casanovas”. The best part of this experience was getting an inside perspective on the making of wildlife documentaries. Cliff and Dawn Frith, renowned birdo's from QLD, were responsible for finding suitable bowers for filming and getting the Bower Bird used to having a human (David Attenborough) lying next to the bower. To achieve this, Cliff paid a visit to the Alice Springs sex shop and purchased a human sized blow up sex doll. He then dressed the doll in the clothes Sir David would be wearing during the filming session and slowly moved the dummy closer to the bower over a two-week period. When it came time for filming the doll was removed and Sir David took the position and completed his spiel, the Bower Bird happily bounced around the bower oblivious to the switch. Needless to say there are quite a few photographs of Ormiston Gorge rangers with “David Attenborough” the sex doll, he's got lovely lips!!

After leaving Ormiston Gorge I moved to Bullita in Gregory National Park, which was a considerable change in lifestyle and work.



Me after a day cleaning out the bore tanks at Ormiston Gorge. One of the less pleasant tasks!!



Sir David (the real thing) and me at Ormiston Gorge

Bullita is located about 50km south of Timber Creek and is the start of the parks extensive 4WD track network. When I arrived at Bullita there were three rangers including myself. Bullita had traditionally been a one man station, with the ranger living in the old homestead and care-taking the old station gear. I moved into a new two bedroom place with no television (which was great) or telephone (not so great), there was an identical place that another ranger lived in and a larger 3 bedroom house which was quite nice for the boss. After living down there for one year we finally had a new satellite telephone system installed that allowed us to get phones in our houses, our boss then left and I moved into his position and house, which already had a phone and TV.

Working in Gregory National Park was a great experience, not always comfortable, but great. The size of the park, 12500 km square, made it a very daunting task to manage. Consequently, we spent much of our working time away from our base at Bullita. The sector of Gregory National Park that I worked in had extremely low visitation which meant

that we could devote a lot of our time to land management activities. This can be broken down into three main categories, fire, ferals and weeds. We also devoted four weeks of the year to fauna surveys and a couple of days for speleological activities.

People are generally surprised to hear that Gregory National Park has the largest interconnected cave system in the southern hemisphere. Speleological groups have been surveying the cave system at Limestone Gorge for the last 12 years and continue to map more and more connected tunnels annually. When I left Bullita around 18 months ago they had mapped just shy of 100km of interconnected tunnels. So each year, whoever had some spare time would don the helmet and light and crawl around after the experts for a couple of days. The first time I accompanied the spelios on a cave mapping trip I was a little dubious about my ability to squeeze through tight spaces and basically be enclosed in the earth for hours at a time. However, after spending a day with this enthusiastic bunch of eccentrics I was hooked on caving, crawling through squeezes that I would have shuddered at before. I still rate this experience as one of the best things I've done with parks and wildlife.

I'm now working out of the Katherine office as part of the Gulf Region which extends from Flora River Nature Park, about 100km west of Katherine to Borroloola in the East. I spend most of my time managing three small reserves near Katherine, Flora River Nature Park, Cutta Cutta Caves Nature Park and Kintore Caves Nature Reserve.

Yet again, I have been exposed to a new lifestyle and a new set of priorities at work. Cutta Cutta Cave is a tourist cave, owned by Parks and Wildlife but managed by a private concessionaire. Recently, we had a new lighting system installed in the caves which has been an exciting and challenging experience. We called on the assistance of a cave lighting expert, Neil Kell, who lives in NSW

Justin Perry (continued)



and has travelled the world studying tourist caves. With his cave knowledge and an eye for design he created a state of the art system controlled by a computer processor and remote control. We are currently in the process of adding some finishing touches to the system and it should be fully operational within the next couple of weeks.

Overall my work is satisfying and diverse, however it does take me away from home quite regularly which is good and bad. Thankfully, I have an understanding and independent wife who puts up with my unpredictable work commitments. I'm enjoying the MTEM course immensely (after I finish each semester anyway) and I have a new found respect for spare time.



Crocodile management is one of the tasks I undertake in Katherine

Letter from Jo Karam (MTEM student) - 28th May 04

I am in Melbourne at the moment as part of the preparations for Timor. It's back to Darwin tonight and a final departure to Timor on Tuesday morning.

My job title is District Team Leader, Oecussi with Oxfam Community Aid Abroad. In a nutshell my job is to run the district office and oversee the office and field staff working on a range of community programs, mostly focussed on health, disaster management and sustainable livelihoods. A major emphasis is also on building civil society through gender equality and assisting people to have a voice in the newly forming government. If you want any more detail let me know.

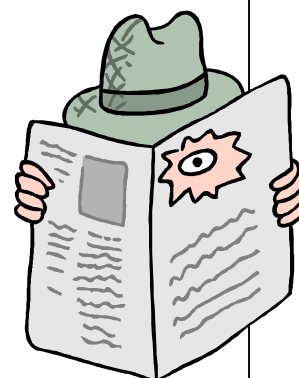
I guess you may also be wondering where this leaves my thesis. Well it is actually all done and I have given four printed copies to Tony (Griffiths – Jo's supervisor).

Bye for now
Jo

Update on Carlos Ximenes (MTEM student)

And to prove THERE IS NO PLACE TO HIDE from TEMSLinks!!
This report just in from CRC-sponsored PhD student, Colin Trainor at Denpasar airport.

Wanted also to mention that Carlos Ximenes one of the Timorese MTEM students got a very nice govt position in Timor-Leste – a political posting with the Ministry of Tourism, Environment, Investment and Minerals and Energy. Forget his title. About 5 weeks ago he visited China, last Thursday at Denpasar Airport I bumped into several Timorese staff from the Ministry – a total of 15 were attending China for 2 months training.



Carlos (realising that further attempts to lay low would prove futile) has since reported in to Penny that his new position is very challenging. He was recently chief on an East Timorese delegation to China, which hosted a forum for Portuguese-speaking countries. Carlos was impressed with the booming Chinese economy, and the advances of the last 20 years. He was also interested to meet people from Portuguese-speaking African countries, who stressed the importance of national stability in fostering a healthy economy—a lesson the East Timorese delegates took on board! Carlos said that many people he met admired his academic background—an Australian Masters degree carries much kudos.

Carlos passes on his best wishes to all his friends from the TEM course.

Congratulations and good luck with your important and demanding career, Carlos. We look forward to hearing from you again (otherwise we'll send Colin back to check on your progress!)

MTEM research projects

By Penny Wurm
MTEM Research Projects Coordinator
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Latest news on MTEM research project students:

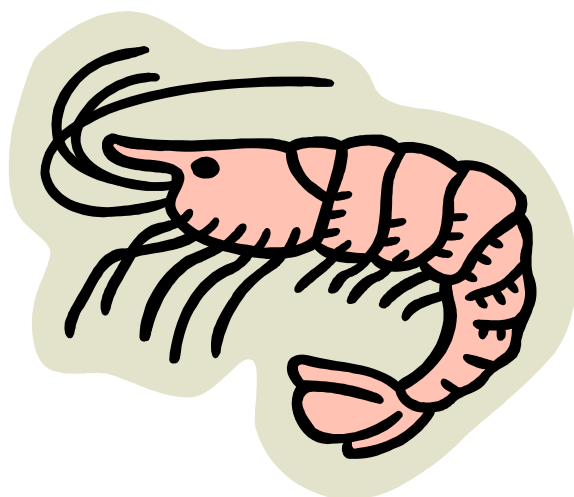
Since I last wrote there have been more fascinating MTEM projects submitted and more to come shortly.

Deb Bass (who works with Great Barrier Reef Marine Park Authority in Townsville) submitted her thesis entitled “Preaching to the converted: community education through participation in seagrass monitoring”.

Johanna Karam (now in Oecussi, East Timor) submitted her thesis “Using indigenous and scientific knowledge in wildlife harvest management: mangrove clams harvest in a remote Indigenous community.”

Carlos Ximenes (who has also returned home to East Timor) submitted his thesis “The effect of wheat powder as a carbon resource through controlled feed C:N ration on shrimp growth, survival rate, water quality of shrimp culture with zero water exchange”.

A big congratulations to everyone.



MTEM Theses

Did you know that copies of some of the best completed MTEM Theses are lodged in the Short Term Loan section of the CDU Library? They are listed under unit code SBI520 in the library catalogue, but are a bit hard to find—they are in the Personal Copy collection. Numbers 534, 541, 579, 823- 825 are MTEM theses (lodged there by Dr Penny Wurm).

Graduation May 2004

This year Deirdre Allen and Patti Algie strode the beautiful red carpet to claim their glory as MTEM and GDTEM graduates respectively. Others who completed but who weren't able to make it to the ceremony were:

MTEM: Amaral Chibeba; Makoto Hasebe, Nathalie Laurence, Shozo Mori, Julia Schult

GDTEM: Penny Marchment

GCTEM: Marianne Damholdt

Congratulations to all, and best wishes for your future employment!



Michelle swimming next to a 9 metre whale shark

Michelle Press—Field Research at Ningaloo Reef, Western Australia

My time in Darwin has had ups and downs, which may fade in my memory over the years, but I will never forget the awesome experience I was privileged enough to be a part of. The experience I speak of is my time in Ningaloo Reef, Western Australia tagging Whale sharks (*Rhincodon typus*), with my research supervisor Mark Meekan from the Australian Institute of Marine Science (AIMS) as well as scientists from the National Oceanographic and Atmospheric Association (NOAA) in Hawaii and the University of New Hampshire. Over a span of seven days we tagged 15 Whale sharks from 4.5 meters to 11 meters in length. The tags that were used will “pop off” at designated times and download the information they have collected to a satellite allowing researchers to get a better understanding of where these sharks travel once they leave Ningaloo Reef. My role in this exciting adventure was to take digital photographs of each animal to add to a collection of 300 photos that have been given to me already for my thesis. My task is to identify each of the sharks as individuals and create a sort of photo library so that tour operators and researchers can

recognize and record animals that are returning each year. A significant number of animals have identifiable scars and injuries, which will possibly make my job a little easier. For those animals that have no distinguishing marks I will pursue pattern recognition research on their spots and stripes, which are unique to each individual shark.

Ningaloo was my first remote destination in Australia (besides Darwin) and it fulfilled all of my expectations. It took an hour travel by paved road and 45 minutes by dirt road to reach our camp, which was Ningaloo station. There were so many kangaroos, Emus, cattle and sheep around that we couldn’t drive at night. We stayed at the shearer’s quarters, but after the first night of mice rummaging around our rooms and nibbling on the finger of one of the other scientists we all decided to sleep under the stars for the rest of the week. All in all, the trip turned out to be not only good for my career, but also for a better understanding of what fieldwork entails. I want to thank Mark Meekan and Lindsay Hutley for helping make this trip a reality. I will never forget it.

ACIAR Fire in Eastern Indonesia Project - update

By Penny Wurm

You may remember a short article in the last *TEMS Links* reporting on a field rip to Sumba in eastern Indonesia. Since then there has been considerable activity, and I'd like to report specifically on developments in the educational component of the project.

Dr Agna Krave, Dean of the Faculty of Biology at Satya Wacana Christian University (UKSW), visited CDU at the end of May. His visit culminated in the signing of a MoU, under which research and educational collaborations will develop between the two universities. During Agna's hectic visit he presented a seminar on his work on soil microbial communities under differing land uses, and also introduced the structure and curriculum of the Magister of Biology, a postgraduate coursework program. Educational collaborations will commence with the inclusion of *SBI507 Ecology and Management of Tropical Savannas* into the Magister curriculum. While here, Agna was given a tour of the SBI507 learning materials by Sam Setterfield (unit developer and coordinator) and Lindsay Hutley (unit co-lecturer). Karen Gibb also explored future research collaborations with Agna, using molecular techniques to monitor and measure soil health. They hope to collaborate on a future project in eastern Indonesia. We also met with Garry Cook (CSIRO), who was also enthusiastic about future collaborations.

I was fortunate to spend 8 days at UKSW in late June, further developing these educational collaborations. The main campus is in Salatiga in Central Java. Salatiga has a population of about 100,000 and the university is approximately the same size as CDU. The University was established by churches in eastern Indonesia and so it has well established research and education links with communities and government agencies in that Province (Nusa Tenggara Timor). UKSW also had collaborative links with the national University in East Timor, although this link is yet to be re-established

since independence. Unlike other universities actually situated in eastern Indonesia, UKSW also has research capacity, with many staff holding PhDs. The Faculty has 2 professors.

The Faculty of Biology has an education and research focus on environmental biology, molecular techniques, environmental chemistry and ecotoxicology. This focus reflects the types of problems faced in the immediate environment in Central Java – industrial pollution from large and small enterprises, heavy use of pesticides and subsequent contamination of waterways etc.

However the Faculty of Biology is looking to build teaching and research capacity in natural resource management, in order to meet the needs of planners and managers in areas like eastern Indonesia. During this recent trip I met with the curriculum implementation team to look at the best use of TEM course resources in the Magister of Biology. The first activity will be the incorporation of *SBI507 Ecology and Management of Tropical Savannas* into the Magister. Apart from the relevance of the unit content, it was also felt that the emphasis on reading and written work would suit the uptake in a curriculum that is mainly taught in Indonesian, but in which students are required to read in English.



Lunch with students in the Magister of Biology program UKSW. In attendance were (Left to right): Dr Ferry Karwur (Magister of Biology Course Coordinator), Zakarias (from west Timor, works in Department of Agriculture, an extension officer in animal husbandry), Martin (from west Timor, works in Department of Forestry), Dr Penny Wurm (TS CRC Higher Education Project Leader), Dini (family in Sumba, a continuing UKSW student, also planning to do a project in Sumba), Vivian (from Central Sulawesi, a continuing UKSW student), Wiwid (from Salatiga, a continuing UKSW student), Alfons (from north Celebes, a continuing UKSW student), John (from west Timor, works in Department of Agriculture on cash crops), Putu (originally from Bali, but now working for BAPPEDA in West Timor). (apologies to students for providing first names only) (Photo: Penny Wurm)

The Faculty is also interested in building GIS and remote sensing capacity and will explore incorporating *SES501 Landscape Ecology and GIS* as a future unit in the Magister. The team also expressed an interest in developing an eastern Indonesian version of *SBI509 Managing Northern Rangelands* (I promise I didn't suggest it!).

While there, I was treated to a lunch with Magister students. I was struck by the similarities between these students and the typical TEM student. The students were from many areas in Indonesia, but mainly savanna landscapes; many were already employed with government agencies such as agriculture or regional planning, although some were continuing directly from their degrees. I also found much in common with the faculty staff and those at CDU. For example, UKSW is starting to explore flexible learning in order to foster more independent learning in students. The faculty research staff are also acutely aware of the importance of research communication and inclusive consultation if research is ultimately to be effective.

Apart from these very rewarding professional interactions, Agna and the Faculty staff were also very generous with their hospitality, took me travelling in the landscape around Salatiga. Coming from such the sparsely populated landscape of low fertility in northern Australia, I could not believe ubiquitous cultivation in Central Java (one of the most densely populated places on earth). Despite hours of driving we never reached the "bush", but were perpetually in busy traffic and intensive cultivation or dense urban developments. And the source of fertilizer for this giant farm? - active volcanoes. I was lucky enough to see from the plane smouldering Gunung Merapi as we landed in Yogyakarta, and then later from its foot-slopes at the Volcano Information Centre at Ketep.

A future proposal is to develop opportunities for student exchanges, where UKSW students may study here for a block of their course, while a CDU student travels there (similar to the arrangement we have with Aarhus University in Denmark). I would be interested in hearing from any student who may

Dr Agna Krave (UKSW) and Prof Greg Hill (CDU) sign the Memorandum of Understanding between the two universities, while Dr Lynda Prior (TSCRC Education project), CDU Vice Chancellor Helen Garnett and Dr Bronwyn Myers (ACIAR project) look on. (Photo: Barry Ledwidge)



Gunung Merapi, a smouldering volcano, with Dr Agna Krave (Dean Faculty of Biology), Ibu Karina Lawerissa (Lecturer) and Dr Penny Wurm. (Photo taken by Dr Ferry Karwur)

be (or would have been) interested in such an exchange.

For a short article and photo on the MoU see the CDU website at

<http://www.cdu.edu.au/newsroom/stories/2004/june/savanna/index.html>

For more information about the project visit the project website at <http://fireindon.ntu.edu.au/>. There is a link to a document which details the education component of the project available under "About the project".

Indonesian speakers can find out about SWCU at <http://www.uksw.edu/>.

For information on ACIAR see <http://www.aciar.gov.au/>.



WEB-SITES

Ecological Society of America report

The Ecological Society of America's recently released report, "Ecological Science and Sustainability for a Crowded Planet", may be of interest to TEM students. The Report (

<http://www.esa.org/ecovisions/ppfiles/EcologicalVisionsReport.pdf>), is the outcome of many hours of deliberations, debates and discussions, which included participation of the Society's 8,000 members, as well as colleagues within other scientific societies, government agencies, industry, and non-governmental organizations.



New Weeds Report

Weed Categories for Natural and Agricultural Ecosystem Management has recently been published by the Bureau of Rural Sciences, and draws together information on

thousands of non-native plants that have become naturalised in Australia. The book categorises the approximately 2700 species into groups of major and minor threats to natural ecosystems and agricultural environments.

The report is available in PDF format <http://www.daff.gov.au/brsweeds> - go to 'Hot Topics'.

New National Heritage System

The Australian Government has implemented a new heritage system from the 1st January 2004, with a \$52.6 million budget over 4 years. Details at: <http://www.deh.gov.au/heritage/index.html>

Native Vegetation Enquiry

The final report into Impacts of Native Vegetation and Biodiversity Regulations has been completed by the Inquiry and sent to the Australian Government for Consideration

Details at: www.pc.gov.au/inquiry/nativevegetation/index.html

Australia's 20 worst weeds: from Alligator weed and Athel pine to Salvinia and Willows

A strategic national approach to the control and eradication of the 20 identified weeds of national significance has been developed with NHT funding.

"The difference between the 20 weeds of national significance and the other 350 weeds listed under the Noxious Weeds Act, is the level of action against the weed. Actions against the weeds of national significance are coordinated at a national level" says John Thorpe, National Weeds Management Facilitator. Each weed has a national coordinator and a national strategy.

www.weeds.org.au

"The non-profit lobby and Fraser Island (and some guidelines for lobbying)"

a paper first published in 1983 by FIDO, the "Watchdog of Fraser Island", is now available on FIDO's website:

www.fido.org.au

It analyses the campaign to stop sandmining during the early 1970s.

The Marine and Coastal Community Network

To receive MCCN's free national newsletter "Waves" email: nat-off@mccn.org.au

Waves is an excellent information source of national and international marine and coastal news and research.

Australian Biodiversity Information Facility

The Australian Biodiversity Information Facility (ABIF) provides online delivery of taxonomic and biological information on species known to occur in Australia.

<http://www.deh.gov.au/biodiversity/abrs/online-resources/abif/index.html>

The Biodiversity Toolbox

Designed to assist anyone involved in the planning and management of biodiversity conservation.

www.deh.gov.au/biodiversity/toolbox/index.html

Citizen Science Toolbox

helps people search for appropriate tools for different types of community consultation, communication, capacity-building or partnership activities. There are more than 60 community involvement tools outlined.

<http://www.coastal.crc.org.au/toolbox/index.asp>

Wildwatch

The Wildwatch survey was conducted by the ABC, and received 27,364 responses. Check out the findings about wildlife in our gardens at:

<http://abc.net.au/wildwatch/>

jobhunters:

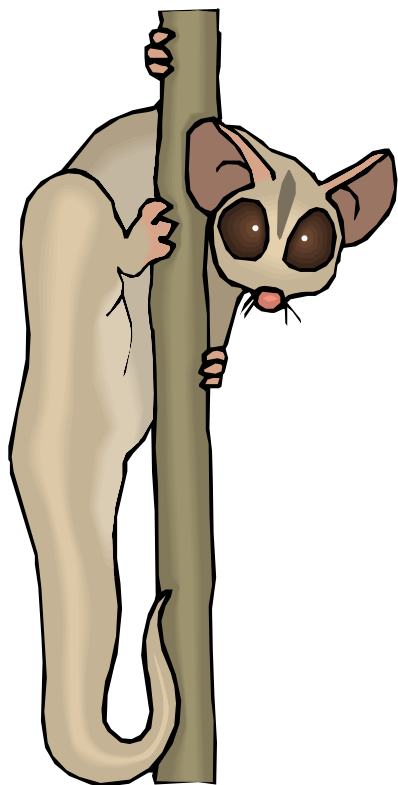
Hallmark Editions have two very useful sites, one for environmental jobs:

<http://www.envirojobs.com.au>

the other is for jobs in research:

<http://www.researchjobs.net.au>

"NRMjobs" is another excellent site advertising jobs that TEM students are likely to be interested in: <http://www.nrmjobs.com.au>



SEMINARS, CONFERENCES & WORKSHOPS

The **Ecological Society of Australia** maintains a comprehensive listing of relevant conferences at:

www.ecolsoc.org.au/ConferenceListing.html

Why not check out their student memberships when you visit their site?

XXII International Congress of Entomology, Brisbane

15th -21st August 2004. See www.ice2004.org



4th Australian Stream Management Conference Oct 2004

The 4th Australian Stream Management Conference is being held in Launceston, Tasmania from 20-22 October 2004.

www.cdesign.com.au/stream

17th Australasian Wildlife Management Society Conference, Nov/Dec 2004

The AWMS Conference will be held at Kangaroo Island from 29th Nov to 2nd Dec 2004. Details at <http://www.awms.org.nz/files/kiconf.pdf>



SEMINARS AT CDU

Keep an eye on the seminars at CDU—the EH&S Faculty and Key Centre for Tropical Wildlife Management (KCTWM) are sharing a slot on Wednesdays from 12 noon to 1pm in the Business Lecture Theatre (22.01). The CDU website and Key Centre websites have details:

<http://www.ntu.edu.au/faculties/site/research/pgresearch/semprogram.htm>

CSIRO SEMINAR SERIES

These are held at CSIRO Seminar Room, Vanderlin Drive, Berrimah at 3.45 pm on Fridays
Visit the website: www.terc.csiro.au/seminars

TEMS Links

Tropical Environmental Management Students' Newsletter

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If undelivered, return to L Prior, Tropical Savannas CRC, CDU, Darwin 0909

The Northern Territory Field Naturalists Club meets on the second Wednesday of the month, at 7.45 pm in the SAIKS seminar room (Bldg 30) here at CDU Casuarina. Guest speakers present informative talks on the flora and fauna of the region. There are also regular excursions. Contact Don Franklin: don.franklin@cdu.edu.au, phone

The Top End Native Plant Society meets on the third Thursday of each month at Marrara Christian School (corner of Amy Johnstone and Macmillans Rd). The meetings start at 7.30 and invited guest speakers provide insight into various aspects of Top End flora. Visit their website for more info:

<http://tenpsnt.tripod.com/>

NTECOL discussion list

"NTECOL is a discussion list for people with an interest in the ecology and biology of the organisms and communities of Northern Australia.

The primary purpose of the list is facilitate communication among interested people and organisations so as to increase the flow of information and facilitate interaction. This could include--but need not be restricted to--announcements of seminars, workshops and conferences, discussion of topical issues, and requests for information or collaboration."

TO SUBSCRIBE, PLEASE GO TO THIS PAGE:

<http://lists.cdu.edu.au/mailman/listinfo/ntecol>

If you want to be removed from our mailing list (electronic or hardcopy), please let me know by emailing Lynda.prior@cdu.edu.au