Simple trick leads to major breakthrough

by Lindy Brophy

UWA biophysicist Boris Martinac describes a ‘simple trick’ played on a bacterium cell as one of the highlights of his lifetime’s research, and predicts that it might lead to a whole new way of treating disease.

Associate Professor Boris Martinac, from the School of Medicine and Pharmacology, has been working on mechanosensitive channels in bacterial cells for 20 years. He and his collaborator, Professor Eduardo Perozo, from the University of Virginia in Charlottesville, have recently had their major experimental breakthrough published in both Nature and Nature Structural Biology, attracting attention world-wide from biophysicists, engineers and structural biologists.

Their research was also chosen, from more than 150 nominations, to be presented in the symposium New and Notable at this year’s annual meeting of the American Biophysical Society, which showcases the very best biophysical research.

Professor Martinac and Professor Perozo are the first scientists to work out how to open these channels by chemically manipulating the bacterium’s membrane environment.

If they can work out how to keep the channel open, the cell (and therefore the bacteria) will die — a novel way to treat disease.

He explained that mechanosensitive channels were found in all sorts of cells, in which they functioned as molecular transducers of mechanical stimuli in a variety of physiological processes such as hearing and blood pressure regulation. Those channels found in bacteria acted as safety valves regulating internal cellular pressure.

“Bacteria have only a thin membrane separating them from their environment. Excessive moisture will cause a bacterium to swell, and it relies on its membrane proteins, known as mechanosensitive channels, to open and release the pressure,” he said.

Continued on page 4
Like a great Kimberley dust storm, the Federal Budget has come and gone ... and we can now take stock of its meaning in quieter days before the Parliamentary battle begins.

It was certainly a turbulent few days. As Chair of the AVCC I took part in the ‘Budget Lockup’ and having checked in our mobile phones, signed a declaration of ‘secrecy’, we were ushered into DEST conference rooms (with disabled computers and telephones) and allowed to read the higher education papers in the budget for some 3 hours before the Treasurer began his televised speech at 7.30 pm.

That was followed by a media frenzy of enquiries and excited crowds in the corridors of the Parliament, with TV and electronic media eager to talk with anyone who had a voice and could stand in front of a camera! Democracy at its excited worst, and where complex issues and detailed analysis had little place. The smart one-liner rules such occasions.

Our AVCC message was reduced to a simple statement, that the universities welcomed the change in direction of Federal funding and policy. But we had several critical concerns with the reform package.

In particular, we enumerated four vital areas — on which we have now done significant analysis and which formed the basis of major discussion in a meeting of the AVCC Board of the directors (Sunday 18 May), and then of the whole Plenary of all Vice-Chancellors on the following Monday and Tuesday (19/20 May).

Those key areas have remained:

- Student support arrangements – equity considerations.
- Yoking investment in education to governance and workplace changes
- Increasing bureaucratisation for compliance reasons.
- Lack of significant indexation.

We have also emphatically rejected aspects of the Government’s proposals – notably VSU intentions, the interest rate on FeeHelp, and costs being put on the Universities to fund the questionable international strategy.

Looking around our own landscape of WA, and especially of UWA, what does this package mean for us?

Most positively, it should mean significant new funds in our basic operating resources, new fully-funded undergraduate places, a regional loading (recognising our centres in Albany and Geraldton), access to funds for excellence in teaching and learning processes, support for student equity programs and for Aboriginal education initiatives as well as performance rewards for performance management. A figure of $10-20 million dollars per annum is possible from 2005.

Controversially, it would also give us the capacity to vary HECS levels (up or down) and to charge full fees to domestic undergraduates. The University will carefully analyse our options and be mindful of equity and student HECS burdens.

All this is, of course, subject to passage of the reforms through the Federal Senate.

We need to be both pro-active in preparing UWA to achieve the maximum benefit from the package of reforms. And be very careful, considered and inclusive in examining the new HECS propositions (I doubt if we should wish to advance on the full-fee options).

In that latter debate we need to keep hold of the facts rather obscured by alarmist claims fed by a media eager for drama and conflict about huge degree costs.

We should also look carefully at areas where we wish to lower HECS, in the form of UWA scholarships in key equity and educational categories. We would have that freedom.

Overall – as a sector we need to ensure the excellence of our universities through appropriate mixed funding modes and balance that with key equity considerations.

Nothing less than the future of higher education is at issue. The present arrangements are unsustainable and increasingly unacceptable. We desperately need to go forward from the crossroads!
Marketing lecturer Dave Webb smiles as he says that he doesn’t quite fit the mould.

“An environmentalist and a Tibetan Buddhist teaching marketing just doesn’t seem right to some people,” he says.

But Dr Webb has integrated his interests and his teaching in a bid to build a school for Tibetan children. As part of their electronic marketing course work, some postgraduate students are designing a Web page to assist in fundraising for the school. Another group of postgraduate students is working on a fundraising strategy.

“And three undergraduate students taking promotional strategy are doing some volunteer work, getting some promotional material together. It’s wonderful first hand experience for them,” he said.

Dr Webb said he met Tibetan monk, Lobsang Tsering, in a monastery in Nepal in 2001. “He told me of his dream to build a school for the children of a region that had the Tibetan name of Amdo but is now part of the People’s Republic of China and is called Qinghai, although 97 per cent of its residents are ethnic Tibetan.

“He told me that the region had suffered some severe snowstorms in 1996-97 and that these were followed by three years of drought. The ecological effect of these natural disasters has played havoc on the livelihood of the nomads who, as herders, are heavily reliant on yak and sheep related trade (wool, milk, meat) to eke out a meager living for themselves.

“Essentially this has left much of the local population destitute. These conditions don’t bode well for the sustainability of the nomadic culture of these Tibetan people. No one solution can address the scale of the problem but, working toward the future, the provision of education is seen as essential. The level of literacy in this region stands at only seven per cent, with children having virtually no possibility of education,” Dr Webb said.

Dr Webb has recently set up the Tibet Support Program (TSP) under the auspices of the Australian Foundation for the Peoples of Asia and the Pacific (AFPAP) to raise $350,000 to build a school called Gesar Sherab (King of Wisdom) for 225 children aged 5 to 15.

“The Chinese Government has already given approval for the school and they will supply six teachers. The first intake of 30 children for 2004 has already been chosen and we hope to have classrooms, dormitories and a kitchen ready for them next year. The school will develop and more children will come each year for the next several years.”

Dr Webb said that most of the children would board at the school as their families were nomadic and came from all over a very big area.

“In addition to fundraising for the school, a child education sponsorship program will be developed, and, on my trip to Qinghai in June and July, I’ll be meeting the first 30 children, taking their photographs and writing their profiles for prospective sponsors in Australia, Holland, England and the US.” He estimates it will cost about $30 a month (tax deductible) to sponsor a child at the school.

He said he had already received some offers of help and would start collecting funds once the logistics and legal framework were in place sometime in June this year. “We are also working with groups in Holland and England and I hope to get people from the US involved too.

He will be meeting representatives from the Snowland Service Development Group when he goes to Tibet next month to establish a partnership with them. The Snowland group is made up of local Tibetan people who came together in 2001 to try to do something for their ravaged homeland. They are developing and managing social development programs, covering health, education and agriculture.

“I will also meet representatives from the 258 nomadic villages from which the children will come.” Not all these villages have children of school age, but there are plans for more schools in the future.

Dr Webb is excited about the establishment of the school and also pleased that he has had the opportunity of introducing his students to not-for-profit marketing. Dr Webb can be reached on 9380-7380 or dwebb@ece1.uwa.edu.au
Simple trick leads to breakthrough

Continued from page 1

“Before I came to UWA, 10 years ago, my group in the laboratory of Professor Ching Kung at the University of Wisconsin in Madison succeeded in ‘tricking’ the mechanosensitive channels into opening, by using cone shaped lipids to induce curvature of the membrane. We fooled the channels by introducing a substance that made them think pressure had been applied, so they had to open to relieve that ‘pressure’.

“It was one of the best ideas I have ever had,” Professor Martinac said.

“In Wisconsin we also succeeded in cloning one of the bacterial channels called MscL, meaning the mechanosensitive channel of large conductance. A few years after we cloned this channel, the first of its kind, a group of crystallographers in the laboratory of Professor Douglas Rees at Caltech succeeded in crystallising MscL, thus providing the information on its three dimensional structure.”

Professor Martinac said that about 20 laboratories around the world were now working on the MscL protein, since his team’s discovery. “They are in America, Europe and a few in Australia. It is quite nice to have your work recognised and people picking up on your research.”

He said that, from here, his work would be directed at trying to ascertain whether their discoveries were true of all mechanosensitive proteins.

“But as far as a direct application is concerned, MscL type of channels might provide novel targets for drug therapy.”

“Drug resistance in pathogenic strains of bacteria is a huge problem because of overuse of antibiotics across the board. I think it is only a question of time before all of the known pathogenic bacteria become resistant to almost every antibiotic available today.

“When the channel opens in a bacterium cell naturally, it is simply to relieve pressure, and it closes again almost instantly. If we can work out how to keep it open, this will kill the pathogenic cell, and the bacteria will die.”

Census demographics available

The Business Library has acquired information collected in the last national census on CD-ROM.

CDATA 2001 is a product of the 2001 Census of Population and Housing. It is a sophisticated program which can produce maps and tables. And it is available to all students and staff.

The Australian Bureau of Statistics surveyed more than nine million households, not only counting the population but collecting information on the social, economic and housing characteristics of Australian society.

Business Library Reference Librarian Michelle Mahoney said the benefit of CDATA 2001 was that it enabled the user to choose the specific demographic characteristics required, rather than having to select from pre-defined output.

“CDATA is a useful resource for both staff and students. The library has bought the Quickbuild version of CDATA — this is ideal for inexperienced and intermediate global information system users,” she said.

CDATA Quickbuild also includes standard base map data which shows details such as major roads, rivers and railway lines. This detail enables the user to identify major landmarks or features to help create customised regions.

Ms Mahoney said that additional data packs that could be added on to CDATA would become available soon. “For example SEIFA (Socio-economic indexes for areas) is of particular interest to UWA.”

CDATA runs on a CDROM workstation in the Business Library. Phone or email the Business Reference Librarians to make appointments to use the product (phone 9380 1589 email buslib@library.uwa.edu.au)
Murder is a popular pastime. At the end of a busy day’s work, there is nothing more relaxing for some people than to curl up with a good crime novel, preferably a murder mystery.

And, over the past several years, the forensic science used to solve these mysteries has become an important ingredient in crime fiction.

Last week, UWA’s Centre for Forensic Science presented a week-long crime writing workshop, *Body in the Library*. Associate Professor Ian Dadour, Director of the centre, said he had initiated a similar workshop in 1999 for forensic science students. This time, it was opened to the public and several budding crime novelists took part. Eight forensic science students chose the short course as an optional special course unit.

Collin O’Brien, a former UWA lecturer in English, opened the workshop by introducing one of Australia’s most successful crime writers, Gabrielle Lord. Collin himself spoke later in the week on how to create historical backgrounds for crime novels. He referred to the *Body in the Library* idea of a murder taking place in a grand English manor, with everybody, including the local vicar, being under suspicion, as ‘snobbery with violence’.

Gabrielle Lord has published ten successful novels, two of which have been made into films. She told the students that they had a perfect background from which to write a crime novel.

“I have to work hard to stay au fait with the latest scientific developments, especially in the area of forensic science. But you have it all sewn up, all the knowledge and expertise all around you.”

She urged the students to make the most of their opportunity if they felt they would like to write crime fiction. “All you need then is tenacity and doggedness and the ability to isolate yourself while you write.”

Ms Lord said that writing was like football, chess or knitting. “The more you do it, the better you get,” she said.

She has had help from the NSW police and other agencies when she has needed to research sieges, blood stains, DNA, the witness protection scheme and undercover police investigators.

During the week, Professor Robyn Owens (Computer Science and Software Engineering) guided the group in using computer technology in their writing; Dr Chantal Bourgault (Women’s Studies) talked about representations of the body; and Senior Sergeant James Hofstee presented a session on scene of the crime.

Another crime novelist, Stephen Dedman, ran sessions on gender and crime fiction, and writing crime fiction; Dr Silvana Gaudieri (Centre for Molecular Immunology and Instrumentation) talked about DNA; and Associate Professor Ian Dadour gave a presentation on forensic entomology.

Local crime author and investigator Estelle Blackburn closed the week with a writing workshop.

Novelists Gabrielle Lord (left) and Stephen Dedman (far right) share their thoughts with students Sasha Voss (forensic science) and Adi Idris (biochemistry), and staff Dr Lynne Milne (palynology) and Collin O’Brien (former lecturer in English).
Barbara York Main has been attached to The University of Western Australia for almost the whole of her adult life and she shows no signs of wanting to retire — rather like the trapdoor spider who lives a long life in the same burrow.

But the energetic 74-year old academic has ventured all over Australia and overseas, including the US, New Guinea and Europe, doing field work and studying in museums.

“I’ve been here forever!” she laughs.

After completing her undergraduate and honours degree in zoology at UWA, Professor York Main spent a year in at the University of Otago, New Zealand as an assistant lecturer. When she came back to UWA to start her PhD, in the 1950s, she married Bert Main (now Emeritus Professor AR Main).

“When I completed my PhD, the Zoology department gave me a corner of a lab and a microscope and I went about applying for research grants to support my work … and I’ve been here ever since.”

Professor York Main has done some lecturing, looks after the zoology museum and supervises some Honours students, but the main interest in her academic life has been research into the biology of spiders, particularly the taxonomy, systematics, biogeography and adaptations of trapdoor spiders (Mygaleomorphae).

She works at least one half day a week at the WA Museum. However, she says that taxonomy is lagging far behind.

“There are still so many species unidentified. But people don’t want to get involved in taxonomy. They see it as boring — which it isn’t — they’d rather get into the molecular biology side of things. But what they probably don’t realise is that they couldn’t do that work if there wasn’t already a taxonomic framework to start with.”

Professor York Main said that, with such a current emphasis on biodiversity, it was now even more important to keep taxonomic records up to date. “It can be very exciting to work out the relationships between species and their biogeography,” she said.

Starting from the distinct vantage point of never being afraid of spiders, Professor York Main has always found arachnids, and spiders in particular, a fascinating animal group to study.

Her collection of many hundreds of trapdoor spiders, and almost as many of their trap doors, is housed in the School of Animal Biology (formerly Zoology).

She still makes field trips, particularly to the wheatbelt and the south-west.

Retirement, and the thought of golf or knitting, is as repulsive to Professor York Main as her spiders are to some people. But she gave a talk recently to the Friends of the Library on understanding spiders. So she is doing her bit to change at least one part of the equation.
Spiderwoman

When Barbara York Main started studying trapdoor spiders more than 50 years ago, she didn’t realise they would become such an important part of her life.

Adjunct Professor York Main has been monitoring the same cluster of the species Gaius villosus species of trapdoor spiders in the Tammin shire for more than 30 years and they show no signs of expiring. They burrow underground, constructing a nest with a trapdoor and, once it’s completed, they stay there for the rest of their long lives (nobody yet knows how long), never venturing out.

“WA probably has more variety of trapdoor spiders than the other states because the great geological age of the landscape supports the incredible biodiversity of the southern part of the state,” she said. “We just don’t know how many there are and we will probably never know because there are so few people these days interested in taxonomy.”

Urban development and expanded agricultural activity has seen numbers of trapdoor spiders dwindling and Professor York Main is concerned they may die out in some areas.

“Why should a spider bite me?”

“Not all trapdoor spiders actually make doors, but those that do, remain absolutely sedentary once they have built a nest. Some species arrange twigs in an enticing pattern radiating out from the door, to encourage their prey. When an insect is close enough, they lunge out with their front legs and grab it, but their back legs remain inside the burrow.

“When a male trapdoor spider matures, it abandons its burrow in search of a female (possibly several) with which to mate. It then dies after mating. However, the females continue to live and reproduce for many years.

Professor York Main said that most trapdoor spiders’ young were born in midsummer and stayed with their mother in the nest until the first autumn rains. “Then the mother breaks the seal on the door and they disperse. They don’t feed at all in those five or six months in the burrow. They are born with enough nutrients to see them through until they leave the nest.

“I believe that the females of some species, as they grow older, store sperm, ready to release when they lay eggs. But we still want to know more about their reproductive habits because it ties in with the survival of the spiders and their habitats.”

She said that if trapdoor spiders’ burrows were damaged by land clearing or other disturbances, the dislodged spiders wandered aimlessly, probably until they were eaten by a bird or other predator.

“We think that, after a spider is a few years old, it loses its instinct to initiate a burrow and it doesn’t know what to do if it is dislodged. But if you take one and put it in a hole in the ground (such as in a flower pot), it will happily build itself a door and line the hole with silk. It can renovate but not build again from scratch!”

In all her handling of spiders in the field and in the laboratory, Professor York Main has never been bitten. “Why should a spider bite me?” she asks, rather indignantly.
A bush fire detector, synthetic granite and some novel antibiotics were on show at UWA’s second annual Innovations in Action forum.

The Office of Industry and Innovation (OII) takes advantage of the Australian Innovation Festival to present research projects which have commercial potential.

Most of the seven innovative projects showcased at the forum at University House are in the early stages of development but the 70 members of the audience from the local business community were impressed.

Mark Pownall, editor of WA Business News, said he thought the short pitches from the researchers were excellent, offering a broad range of opportunities across the research spectrum. “Each was captivating in its own way and all had a commercial flavour, even if some were more developed than others,” Mr Pownall said.

Venture capitalists, consultants and state and federal government agencies were represented in the audience.

“We tried to pull together a range of projects that varied from early-stage proof of concept research to projects like Vitrostone (the synthetic granite) which is a company already, with funding raised, and manufacturing plant being installed,” said OII Director, Dr Andy Sierakowski. He said the event was a clear demonstration of UWA’s desire to engage with business to profile UWA’s capabilities.

Vitrostone, a very hard inorganic polymer, developed by materials engineer Raffaelo Cammarano, is already being commercialised. On the board of Vitrostone are businessman and former UWA Senator Harold Clough, Professor Paul McCormick, Dr Andy Sierakowski and Mayor of Vincent and entrepreneur, Nick Catania.

At least one company has declared an interest in potentially licensing one of the other technologies demonstrated.

Professor Laurie Faraone, from the School of Electrical, Electronic and Computer Engineering, whose group presented the infra-red bush fire detector, was enthusiastic. “These sort of events are great,” he said. “We already have commercial leads with two companies on our prototype IR detector as a result of interacting with an individual attending the forum.”

Raffaelo Cammarano (left) shows his Vitrostone samples to Andy Sierakowski and OII staff, Simon Handford and Andrew Beveridge before the presentation.

A clown on a mission

Clark Maul is a serious young man with a serious mission: to make life better for others. But he also likes to clown around.

He is studying law so he can make a difference with his work, and in his spare time, he dons a clown suit to entertain sick children at Princess Margaret Hospital.

His devotion to improving their quality of life is one of the reasons Clark was chosen as the sixth annual winner of the Ciara Glennon Memorial Law Scholarship.

He also works voluntarily at PMH’s Radio Lollipop, is an active member of the City of Stirling Youth Council and often speaks to high school students about being a volunteer and becoming involved in the community.

Presenting the award, the Chief Justice, David Malcolm, said it was great for the legal profession that young, enthusiastic and community-spirited people like Clark were studying law.

Clark said it was humbling to accept the award, knowing how many very deserving students had applied for it and would have been worthy of it.

“People often say of us that we are the leaders of tomorrow. But I like to think that we young people, who are committed to our community, have the responsibility to be leaders today,” he said.

Members of the Glennon family attended the presentation of the scholarship, which was established following the of tragic death of UWA law graduate Ciara Glennon.

Chief Justice David Malcolm and Clark Maul have a quiet chat after the presentation.
Almost 40 years ago, on their first day at university, two young international students from Malaysia met during orientation activities. They became friends and eventually became husband and wife and have always held a great affection for the University. Raymond and Soh Har Wee are now education and management consultants in East Malaysia and act as agents for UWA.

They were among a group of 12 international agents for the University who visited the campus recently to come up to speed on current courses and future programs.

The International Centre hosted the four-day visit by agents from Singapore, Malaysia and Indonesia.

Raymond and Soh Har Wee said it was easy to ‘sell’ UWA to good students. “But we have many students, whose marks are not good enough, who also want to come here,” they said.

Their younger daughter, Leanne, completed a Bachelor of Commerce here several years ago, following in her mother’s footsteps. Raymond has a Bachelor of Economics.

They operate their agency from their office in Kuching, Sarawak, in East Malaysia.

Margaret Anderson, marketing coordinator for UWA’s International Centre, said this first workshop for agents had been hugely successful.

“We took them on a tour of the faculties, not so much to learn about the nuts and bolts, but to look at the research happening there. They need a reason to advise students to choose UWA over other universities, and it is our highly-regarded research that distinguishes us from other institutions,” she said.

“We hope they went away with the idea that if UWA attracts the best researchers, then the students will be taught by these people — the best in their fields.”

The agents enjoyed a range of activities on campus, listening to antique musical instruments in the Eileen Joyce studio, tinkering with racing cars in Mechanical Engineering, and tasting bush tucker in the Faculty of Natural and Agricultural Sciences. They also visited the residential colleges.

All the agents said they were impressed with the staff at UWA, their enthusiasm, commitment and scholarship.

Following the success of the four-day workshop, the agents, all senior staff from education offices, are keen to send their counselling staff to UWA for a similar experience.

Almost 40 years ago, on their first day at university, two young international students from Malaysia met during orientation activities. They became friends and eventually became husband and wife and have always held a great affection for the University. Raymond and Soh Har Wee are now education and management consultants in East Malaysia and act as agents for UWA.

They were among a group of 12 international agents for the University who visited the campus recently to come up to speed on current courses and future programs.

The International Centre hosted the four-day visit by agents from Singapore, Malaysia and Indonesia.

Raymond and Soh Har Wee said it was easy to ‘sell’ UWA to good students. “But we have many students, whose marks are not good enough, who also want to come here,” they said.

Their younger daughter, Leanne, completed a Bachelor of Commerce here several years ago, following in her mother’s footsteps. Raymond has a Bachelor of Economics.

They operate their agency from their office in Kuching, Sarawak, in East Malaysia.

Margaret Anderson, marketing coordinator for UWA’s International Centre, said this first workshop for agents had been hugely successful.

“We took them on a tour of the faculties, not so much to learn about the nuts and bolts, but to look at the research happening there. They need a reason to advise students to choose UWA over other universities, and it is our highly-regarded research that distinguishes us from other institutions,” she said.

“We hope they went away with the idea that if UWA attracts the best researchers, then the students will be taught by these people — the best in their fields.”

The agents enjoyed a range of activities on campus, listening to antique musical instruments in the Eileen Joyce studio, tinkering with racing cars in Mechanical Engineering, and tasting bush tucker in the Faculty of Natural and Agricultural Sciences. They also visited the residential colleges.

All the agents said they were impressed with the staff at UWA, their enthusiasm, commitment and scholarship.

Following the success of the four-day workshop, the agents, all senior staff from education offices, are keen to send their counselling staff to UWA for a similar experience.

Almost 40 years ago, on their first day at university, two young international students from Malaysia met during orientation activities. They became friends and eventually became husband and wife and have always held a great affection for the University. Raymond and Soh Har Wee are now education and management consultants in East Malaysia and act as agents for UWA.

They were among a group of 12 international agents for the University who visited the campus recently to come up to speed on current courses and future programs.

The International Centre hosted the four-day visit by agents from Singapore, Malaysia and Indonesia.

Raymond and Soh Har Wee said it was easy to ‘sell’ UWA to good students. “But we have many students, whose marks are not good enough, who also want to come here,” they said.

Their younger daughter, Leanne, completed a Bachelor of Commerce here several years ago, following in her mother’s footsteps. Raymond has a Bachelor of Economics.

They operate their agency from their office in Kuching, Sarawak, in East Malaysia.

Margaret Anderson, marketing coordinator for UWA’s International Centre, said this first workshop for agents had been hugely successful.

“We took them on a tour of the faculties, not so much to learn about the nuts and bolts, but to look at the research happening there. They need a reason to advise students to choose UWA over other universities, and it is our highly-regarded research that distinguishes us from other institutions,” she said.

“We hope they went away with the idea that if UWA attracts the best researchers, then the students will be taught by these people — the best in their fields.”

The agents enjoyed a range of activities on campus, listening to antique musical instruments in the Eileen Joyce studio, tinkering with racing cars in Mechanical Engineering, and tasting bush tucker in the Faculty of Natural and Agricultural Sciences. They also visited the residential colleges.

All the agents said they were impressed with the staff at UWA, their enthusiasm, commitment and scholarship.

Following the success of the four-day workshop, the agents, all senior staff from education offices, are keen to send their counselling staff to UWA for a similar experience.

Almost 40 years ago, on their first day at university, two young international students from Malaysia met during orientation activities. They became friends and eventually became husband and wife and have always held a great affection for the University. Raymond and Soh Har Wee are now education and management consultants in East Malaysia and act as agents for UWA.

They were among a group of 12 international agents for the University who visited the campus recently to come up to speed on current courses and future programs.

The International Centre hosted the four-day visit by agents from Singapore, Malaysia and Indonesia.

Raymond and Soh Har Wee said it was easy to ‘sell’ UWA to good students. “But we have many students, whose marks are not good enough, who also want to come here,” they said.

Their younger daughter, Leanne, completed a Bachelor of Commerce here several years ago, following in her mother’s footsteps. Raymond has a Bachelor of Economics.

They operate their agency from their office in Kuching, Sarawak, in East Malaysia.

Margaret Anderson, marketing coordinator for UWA’s International Centre, said this first workshop for agents had been hugely successful.

“We took them on a tour of the faculties, not so much to learn about the nuts and bolts, but to look at the research happening there. They need a reason to advise students to choose UWA over other universities, and it is our highly-regarded research that distinguishes us from other institutions,” she said.

“We hope they went away with the idea that if UWA attracts the best researchers, then the students will be taught by these people — the best in their fields.”

The agents enjoyed a range of activities on campus, listening to antique musical instruments in the Eileen Joyce studio, tinkering with racing cars in Mechanical Engineering, and tasting bush tucker in the Faculty of Natural and Agricultural Sciences. They also visited the residential colleges.

All the agents said they were impressed with the staff at UWA, their enthusiasm, commitment and scholarship.

Following the success of the four-day workshop, the agents, all senior staff from education offices, are keen to send their counselling staff to UWA for a similar experience.
While conservation of the environment has been under the spotlight for decades, local researchers have only recently drawn together new information to support conservation programs.

The preservation of plant biodiversity has been the subject of a unique partnership between UWA’s plant biologists and Kings Park staff. This collaboration was highlighted at the launch of their joint book in Kings Park in February.

Microorganisms in Plant Conservation and Biodiversity was edited by UWA’s Professor of plant pathology, Krishnapillai Sivasithamparam, and Kings Park staff, plant conservationist Kingsley Dixon and research botanist Russell Barrett.

The editors began work on the book four-and-a-half years ago, after realising that very little had been published on the link between microorganisms and conservation of plant diversity. “This book fills the gap,” Russell Barrett said.

While plant conservation is increasingly recognised as a global priority, the number of threatened species continues to rise. Microorganisms have been recognised as an essential element in supporting the lifecycles of plant species, but, until now, there has been limited recognition of the relationships between the two systems.

The editors say this book is an attempt to bring to the fore the ecological underwriting provided by microorganisms.

A biochemist chatted with a structural engineer; a professor of computer science laughed with a former policeman who is now involved in forensic research; and an admin assistant from classics enjoyed a conversation with a politics lecturer.

About 20 University employees took pleasure in the recent monthly Staff Meet and Greet at the Vice-Chancellery.

Deputy Vice-Chancellor, Professor Alan Robson, said the get-togethers had been a regular monthly Friday evening event several years ago and he had been keen to revive them, to ensure that staff got to know people outside their own schools and faculties, fostering staff communication and good working relationships.

“People don’t communicate as freely as they might and I think that’s a shame,” Professor Robson told the gathering he hosted recently. “There is nothing special about any of the people invited here this evening. You have been chosen at random to get a good mix of people.”

The Staff Meet and Greet is an opportunity not only for UWA employees to meet each other but to get to know the Vice-Chancellery staff and to visit the Vice-Chancellery.

They are held on Thursday evenings between 4pm and 5.30pm each month. There have been two so far this year and the next function will be later this month.

Elisabeth Carson (Admissions) renews a friendship with Maureen Davison (Vice-Chancellery)
A week to reflect and enjoy

The distinctive rhythm of a didgeridoo and some dramatic indigenous dancing marked the start of UWA’s celebration of National Reconciliation Week.

Dr Richard Walley OAM delivered a traditional Noongar welcome and played his didgeridoo for the lunchtime crowd on the Oak Lawn. “May the good spirits guide you while you are at Uni,” he said. Then later, he added that the best part of Reconciliation Week for non-Aboriginal staff and students was that they could just sit back and passively enjoy the activities. “You don’t have to join a protest march or sign a petition, just enjoy,” he said.

For medical student Kiarna Adams, who is chair of the Western Australian Aboriginal Students’ Corporation, the week’s activities have meant a lot of work, just prior to exams.

Acting Vice-Chancellor Professor Alan Robson said Reconciliation Week was an opportunity for staff and students to think about how they could turn around the disadvantage still suffered by Aboriginal and Torres Strait Islander people.

“Reconciliation requires goodwill, respect and continuous dialogue between indigenous and non-indigenous people,” he said.

Centenary Medals

UWA was well represented among the list of Australians who were recently honoured with Centenary Medals.

The following members of the campus community received medals. Chancellor Dr Ken Michael AM and other external members of the Senate, Lyndon Rowe and Dr Tony Howarth AO, were also recognised.

Hans Arkeveld
Professor Adrian Baddeley
Professor Lawrie Belin
Emeritus Professor Alan Billings
Professor David Blair
Emeritus Professor John Bloomfield
Professor Brian Bosworth
Professor Richard Bosworth
Emeritus Professor Frank Callaway (dec)
Professor Stewart Candlish
Professor Antonio Cantoni
Professor Ian Constable AO
Professor Bruce Elliott
Adjunct Professor Ken Fitch AM
Daryl Foster OAM
Dr Janice Gothard
Dr Jenny Gregory
Associate Professor Sylvia Hallam
Adjunct Professor John Hamblin
Professor D’Arcy Holman
Emeritus Professor Patrick Holt
Emeritus Professor Derek Humpage AM
Professor Jorg Imberger AM
Em Professor Laksiri Jayasuriya OAM AM
Professor John Jory
Professor Byron Kakulas AO
Professor David L Kennedy
Emeritus Professor Albert Main
Professor Barry Marshall
Associate Professor John Melville-Jones
Emeritus Professor Reg Moir AO
Dr Peter Moore OAM
Ian Passmore OAM
Emeritus Professor John Pate
Professor Lorenzo Polizotto
Professor Stephen Powles
Professor Cheryl Praeger AM
Emeritus Professor Jim Quirk AO
Professor Mark Randolph
Professor William Reed
Malcolm Richmond
Professor Alan Robson AM
Professor Deryck Schreuder
Professor John Scott
Professor Margaret Seares AO
Professor Murugesu Sivapalan
Professor Roger Smalley
Professor Fiona Stanley AC
Professor Leonie Still
Professor Bryant Stokes AM RDF
Emeritus Professor Robert Street AO
Emeritus Professor David Tunley AM
Professor Bob White
Professor Jim Williams

Be seen to be green

Contrary to Kermit the frog’s 1980s lament, it IS easy to be green. UWA’s recycling program is proof of that.

But, despite the words green and environment entering the realms of cliché, communities still need to make an effort to save energy, reduce waste, conserve water, and keep the natural world clean.

Unigreen, UWA’s Environmental Services, has a recommended energy management plan. In an occasional column, UWAnews will reproduce some of Unigreen’s guidelines to help staff. Here are some tips.

- Switch off heaters after use
- Ensure heaters are fitted with one-hour timing devices — if you don’t have one, ask for one
- Open windows in winter to allow warmer air inside and make sure there are two openings in the room to allow airflow
- Close external doors during winter to lock in heat and keep out cold air
- Choose Rheem hot water systems when existing urns are replaced.

Facilities Management will contribute 50 per cent of the cost (about $800)
- Report heating or ventilation problems to central plant (9380 2009)
- When buying boiling water units:
  - evaluate your needs carefully
  - consider more efficient alternatives (an electric kettle?)
  - choose the smallest suitable unit
  - install a timer to switch unit off outside working hours
  - contact Facilities Management to arrange replacement of urns with
  - boiling water units
- General power use:
  - purchase laser printers rather than slow inkjet models
  - activate sleep mode on computers where possible
  - buy power-cycled computers for laboratories
  - conduct experiments which require power before 9am and after 3pm
  - switch off printers, photocopiers when leaving the building
  - switch computer and monitor off when leaving the building
  - ensure computer power-saving functions are operational

For other ways to reduce energy use on campus, go to www.ofm.uwa.edu.au/ops/enviro/energycon.htm

THE UNIVERSITY OF WESTERN AUSTRALIA • 2 JUNE 2003
The complexity of the Federal Government’s recently announced package of reforms for the higher education sector presents our University with a range of challenges and opportunities which we will be analysing and responding to over coming months.

While much of the early focus has been on provisions to ‘top up’ the amount currently paid through the Higher Education Contribution Scheme (HECS) and the opportunity to encourage full fee-paying domestic students, there are many other factors in the package which are likely to impact on the way we operate beyond 2005.

Already, preliminary analysis of the package has highlighted some of those areas which are likely to have a significant impact on UWA. These include:

**A New Commonwealth Grant Scheme (CGS)**
- Increase in funding per student place (2.5% in 2005; 5.0% in 2006; 7.5% in 2007).
- New relative funding model for Commonwealth course contribution (12 bands or cost clusters) from 2005.
- Negotiated student load target/mix for each institution.
- Increased funding subject to compliance with national governance protocols and industrial relations policies.

**New places**
- Conversion of 25,000 marginally funded places (‘over-enrolment’) into fully funded places from 2005-2007.
- Distribution of places based on demand, labour-market needs and Commonwealth priorities.
- Additional growth places (1400) from 2007.

**Flexible fees: HECS and HELP Schemes**
- Standard HECS in 3 bands (as existing).
- The option to charge fees above or below HECS (up to a 30% cap).
- HECS-HELP loans to cover fees charged.
- Restriction on domestic full-fee undergraduate students eased (from 25% to 50% per course).
- Full-fee students eligible for HELP loans at 3.5% above CPI (FEE-HELP).
- Loans also available for Australian students studying overseas (OS-HELP).

The outcomes with the greatest impact on UWA will therefore include outcomes with regard to:
- Base funding, resulting from the application of the new CGS.
- Share of additional places, particularly its share of the 25,000 existing marginally funded places to be redistributed on the basis of demand and need.
- Level of compliance with Commonwealth governance and industrial relations conditions.
- Fee levels set with regard to HECS students.
- Issues relating to the option of accepting domestic full-fee undergraduate students.
- Fee levels for any such domestic fee-paying students.
- Impact of measures for international students on UWA’s full-fee paying overseas student program.

While these are the issues which are likely to require the most critical policy decisions for the University, it is likely to take some months to put all the detail to the university’s response to all areas of the package.

The real significance of the package is that we have a valuable opportunity to again examine our strengths and weaknesses, and consider student demand in setting our particular direction from 2005.

UWA’s vision and mission has international excellence as its focus. As a result, UWA is likely to compete on quality, not necessarily on price. This means that we will draw on those aspects of the package of measures which will lead to an improvement in the quality of our teaching and research, and the quality of outcomes for our graduates.

The founding principles of equity and access will be uppermost as the university community deliberates on the best ways forward.
ALCOA
Dr Peter Davies, Faculty of Natural and Agricultural Sciences: ‘Sediment heavy metal levels associated with the Riverwater Dam and the Hotham River’ — $22,955 (2003).

Dr Peter Davies, Faculty of Natural and Agricultural Sciences: ‘Fauna of ephemeral streams’ — $12,600 (2002).

ASTHMA FOUNDATION
Prof Peter Le Souef and A/Prof Jack Goldblatt, Paediatrics and Child Health: ‘Genetics of acute asthma in children’ — $39,918 (2002).


AUSTRALIAN KIDNEY FOUNDATION
Dr Jacqueline Bentel and A/Prof Jennet Harvey, Surgery and Pathology: ‘Purchase of a bio-rad gel doc 2000 gel documentation system’ — $15,000 (2003).

AUSTRALIAN RESEARCH COUNCIL
Luborodna Kalaydjieva, UWA Centre for Medical Research: ‘Cloning the gene for a severe autosomal recessive form of Charcot-Marie-Tooth disease’ — $173,762 (2002-03).

NATIONAL HEART FOUNDATION
Dr Graeme Hankey, Prof Konrad Jamrozik, A/Prof Francesco Van Bockxmeer and Dr Ross Baker, Medicine and Pharmacology, Surgery and Pathology and Population Health: ‘A randomised, double-blind, placebo-controlled trial of vitamins to prevent stroke’ — $100,000 (2003-04).

NHMRC
Dr Darryl Knight and A/Prof Philip Thompson, Medicine and Pharmacology: ‘Integrin-growth factor interactions in the development of airway wall remodelling’ — $384,000 (2003-05).

A/Prof Richard Prince, A/Prof Martha Hickey, A/Prof K. Matthaei, A/Prof Tom Hambleton, A/Prof Peter L. Thompson and Dr Ian Jacobs, Primary, Aboriginal and Rural Health Care, Population Health, Medicine and Pharmacology and Surgery and Pathology: ‘Randomised double-blind placebo-controlled clinical trial of adrenaline in cardiac arrest’ — $190,000 (2003-05).

Dr Patricia Price and A/Prof M. A. French, Surgery and Pathology: ‘Immune dysregulation in HIV patients with immune reconstitution after highly active anti-retroviral therapy’ — $390,000 (2003-05).

Dr Jiak Xue, A/Prof Ping Hao Zheng and Mrs Angela Carrello, Surgery and Pathology and Biomedical and Chemical Sciences: ‘The role of V-ATPase accessory subunit AC45 in osteoclasts’ — $225,000 (2002-04).


A/Prof Martha Hickey, Women’s and Infants’ Health: ‘The role of MMPs 1 and 9 and MT-1 MMP in hormone replacement therapy related irregular bleeding’ — $280,000 (2003-05).

Dr Everett F. Magann, Women’s and Infants’ Health: ‘The effects of a structured swimming program on pregnancies complicated by gestational diabetes’ — $285,000 (2003-05).

Mr Timothy Moss, Prof John Newnham, Dr Ilias Nitos, Prof R. Harding and Dr S. M. Rees, Women’s and Infants’ Health: ‘Impact of chronic intrauterine inflammation on neuro-developmental and physiological responses to fetal hypoxia’ — $268,750 (2003-05).

Dr Samantha Busfield, UWA Centre for Medical Research, Animal Biology: ‘Characterisation of neuroregulin-2 function in the nervous system’ — $175,000 (2003-05).

NHMRC VIA ANU
A/Prof Philip Thompson, Dr S. Hogan, Dr K. Matthaei and Prof I. Young, Medicine and Pharmacology: ‘Regulation of allergy and inflammation’ — $1,050,000 (2003-07).

REBECCA L COOPER MEDICAL RESEARCH FOUNDATION

Continued on back page
Tuesday 3 June

SOIL SCIENCE AND PLANT NUTRITION SEMINAR
‘Modelling solute transport through soils’, Melissa Bromly. 4pm, Agriculture Lecture Theatre.

INSTITUTE OF ADVANCED STUDIES/ANATOMY AND HUMAN BIOLOGY SEMINAR
‘Modes of evolution and genetic variation in the vertebrates of Wallacea, Eastern Indonesia’, Associate Professor Linc Schmitt, ANHB. 1pm, Room 1.81, ANHB Building.

Building Contact: Philomena De Lima, 9380 3290, pdelima@anhb.uwa.edu.au.

Wednesday 4 June

BIOMEDICAL AND CHEMICAL SCIENCES/WAIMR SEMINAR
‘An update on stem cell therapy for cardiac disease’, Prof Bob Graham, Victor Chang Institute. 4pm, WAIMR Seminar Room, B Block, QEIMC.

GEOGRAPHY SEMINAR
‘Understanding photochemical smog from formation to control strategies’, Dr Sam Saunders. 12noon, Geography Lecture Theatre 1.

Thursday 5 June

FREE LUNCHEON CONCERT
‘University Brass Ensemble with Darryl Poulsen as director. This concert closes the Autumn/Winter Lunchtime Series with featured works by Gabrieli and Strauss. 1.10pm, Winthrop Hall.

UNIVERSITY MUSIC SOCIETY CELEBRATION
An evening with Beethoven. Mark Coughlan introduces the informal evening exploring the chamber music and songs of one of the greatest of all composers. Performances include Violin Sonata No 1, Ghost Piano Trio and the song cycle To the Distant Beloved 7.30pm, Octagon Theatre. Tickets available from BOCS on 9484 1133 or the Octagon Theatre on ext. 2440.

Friday 6 June

INFORMATION MANAGEMENT AND MARKETING SEMINAR
‘Total travel cost in stochastic traffic assignment’, Dr Martin Hazleton. 1lam, Seminar Room (SSS223). Second Floor, Social Sciences South Building.

BIOMEDICAL AND CHEMICAL SCIENCES SEMINAR
‘Can cardiac alpha-1 receptors preserve function in the setting of myocardial disease?’, Prof Bob Graham, Victor Chang Institute. Hosted by Physiology, 1pm, Simmonds Lecture Theatre.

Sunday 8 June

SPECIAL 50TH ANNIVERSARY CONCERT
Daniel Kossov, Concertmaster of the West Australian Symphony, directs the University String Orchestra in this special concert celebrating UWA Music’s 50th anniversary. Works featured include Vivaldi’s Concerto for 4 violins and Shostakovich’s Quartet No 8 arranged for string orchestra. 5pm, Winthrop Hall. Tickets available from BOCS on 9484 1133 or the Octagon Theatre on ext. 2440.

Tuesday 10 June

SOIL SCIENCE AND PLANT NUTRITION SEMINAR
‘Soil fauna and soil processes in Western Australia: from crumbs to structure’, Dr Graham Oslor. 4pm, Agriculture Lecture Theatre.

Wednesday 11 June

ENVIRONMENTAL DYNAMIC SEMINAR
‘Integrated scenario modelling for more sustainable catchment management’, Prof Tony Jakeman, Centre for Resource and Environment Studies, The Australian National University, Canberra. 4pm, Blakers Lecture Room, Ground Floor, Mathematics Building. All welcome.

Friday 13 June

ASIAN STUDIES SEMINAR

CLIMA SEMINAR
‘Evolution in sown mixtures of subterranean clover’, Phil Nichols, Department of Agriculture WA. 4pm, CLIMA Seminar Room.

PUBLIC LECTURE
‘The practice of equanimity and non-discrimination—how to overcome the prejudices of your mind to achieve profound and lasting compassion’, Venerable Robina Courtin. Venerable Robina Courtin has been a nun in the Mahayana tradition of Buddhism for 24 years. She has served as a personal bodyguard to His Holiness the Dalai Lama and is currently the Director of the Liberation Prison Project which takes care of the spiritual needs of more than 1000 prisoners in 250 countries, including many on death row. 6.30pm, Octagon Theatre. $25 (Concessions and UWA staff members $20). For event information go to http://www.extension.uwa.edu.au.

Sunday 15 June

KEYED UP! PIANO RECITAL SERIES
Italian pianist Cristiano Burato performs an all Chopin recital. Following his sensational sell-out appearance in the 2001 series, Cristiano Burato makes a welcome return to Keyed Up! Burato’s dazzling performances at the 1996 Sydney International Piano Competition established him as a firm favourite with Australian audiences. The young Italian pianist is a major prizewinner and has been awarded the Medal of the President of the Italian Republic. Recital includes Sonata No2 in b flat minor Op35, Fantasie in f minor Op49, Berceuse Op57, 12 Etudes Op25. 5pm, Octagon Theatre. Tickets $25/$18 concession. Bookings at BOCS Outlets 9484 1133 or the Octagon Theatre 9380 2440.

Please supply Campus Diary entries to Joanna Thompson by June 4 for the June 16 issue.

Telephone: 9380 3029
Facsimiles: 9380 1162
Email: joanna.thompson@uwa.edu.au
The Institute of Advanced Studies invites you to this free public lecture which is part of the two-day symposium.

Maintaining Minority Languages in a Transnational World: Australian And European Perspectives

convened by
Professor Anne Pauwels
Dean, Faculty of Arts, Humanities and Social Sciences, UWA

Presented by
Professor Guus Extra
Babylon Center for Studies of the Multicultural Society
Tilburg University, The Netherlands

Comparative Perspectives on Immigrant Minority Languages in Multicultural Europe

Geography Lecture Theatre 1
Wednesday 4 June at 6pm

The two-day symposium on June 5-6 brings together leading European and Australian scholars working on the maintenance of minority languages, bilingual and minority language education, language conflict, linguistic diversity and language policy. The aim of the symposium is to compare and evaluate European and Australian approaches to dealing with these issues.

The symposium on Thursday 5 June will be held at the Economics and Commerce Conference Room and on Friday 6 June at the Old Senate Room. Numbers are strictly limited to 50. Costs for registration are as follows

Full - $40 for both days
or $25 a day
Students - $10 for both days
Registration fee includes lunch, morning and afternoon teas and drinks at conclusion

Program details at www.ias.uwa.edu.au/activities_and_programs

For information please contact
Terri-ann White,
Institute of Advanced Studies on 9380 2114
or email tawhite@cyllene.uwa.edu.au

PUBLIC PROGRAMS  8 June – 6 August 2003

Installation: The Private Moment, installations of three women artists are presented.

Friday 7 June

Sculpture Gallery, Main Building
6pm – 8pm

Art Talk: Three artists talk about their work and their contributions to Kununurra Art Gallery.

Friday 7 June

Main Building, Main Building
7.30pm

Opening: "It’s Only Art". Artists from the community re-interpret and enhance the gallery works.

Friday 7 June

Main Building, Main Building
8pm

Lawrence Wilson Art Gallery

Need temporary, contract or permanent staff?

Workskills Professionals are proud to be a wholly owned and operated WA Company and are preferred suppliers to State and Federal Government agencies. Supplying staff in the areas of:
- Administration/Clerical
- IT/Computing
- Professional/Technical
- Skilled/Unskilled Labour

We have been supplying candidates with previous tertiary (University) experience to UWA since 1993. We have developed a Star Education Performers list to capture these experienced people, enabling us to deliver a fast quality service.

Try us — we are sure you will notice the difference

Give our friendly staff a call on
Ph: (08) 9201 7777  Fax: (08) 9201 7778
requestwa@workskillsprofessionals.com.au
www.WorkskillsProfessionals.com.au
Dr Clive Francis and RURAL INDUSTRIES R&D CORP: ‘Defective signalling by the prog130 cytokine family plays a central role in the pathogenesis of pulmonary fibrosis’— $16,000 (2003).

Ms Linda Slack-Smith, Dr Davina French and Ms L. M. Short, Population Health and Psychology: ‘Aged percepts of dental services and oral health in the community’— $13,031 (2003).


Dr Johanna Pluske, Agricultural and Resource Economics: ‘What value do Western Australian producers place on lupin seed and how much do they want?’— $17,612 (2003).


Rebecca L Cooper Medical Research Foundation

Dr Darryl Knight and Dr S. E. Mutsaers, Medicine and Pharmacology: ‘Effects of statin and fibrate therapy on blood vessel function in patients with chronic renal failure’— $19,833 (2003).


Dr Aaron Oakley, Crystallography Centre and Medicine and Pharmacology: ‘Structural and functional investigation of the renilla’— $18,000 (2003).


Mr Peter Franklin, Paediatrics and Child Health: ‘Can HiFiA filters improve sleep in children with seasonal allergic rhinitis?’— $11,923 (2003).

Dr Peter Richmond, Paediatrics and Child Health: ‘Impact of pneumococcal conjugate vaccine on mucosal immunity in children with recurrent otitis media’— $15,000 (2003).


Ms Linda Slack-Smith, Dr Davina French and Ms L. M. Short, Population Health and Psychology: ‘Aged percepts of dental services and oral health in the community’— $13,031 (2003).

Miss Maria Franchina, Biomedical and Chemical Sciences and UWA Centre for Medical Research: ‘Genetic heterogeneity of the human DNA methylating enzyme encoding gene, DNMT3B and development of non-Hodgkin’s Lymphoma’— $15,000 (2003).


Dr Barbara Cook, Faculty of Natural and Agricultural Sciences: ‘Conservation and taxonomic implications of population subdivision in a freshwater crayfish from Western Australia’— $12,000 (2003).

Dr Terence Walshe, Faculty of Natural and Agricultural Sciences: ‘Modelling historical fire frequency in the dry sclerophyll forests of Southwestern Australia’— $7000 (2003).


A/Prof John Roberts and Dr Philip Vercoe, Animal Biology: ‘Paternity analysis in the quacking frog Crinia Geogiana’— $12,500 (2003).

Mrs Nicole Thomas, Animal Biology: ‘Developmental changes in visual pigment gene expression; environmental control of colour vision’— $10,000 (2003).

Classifieds

FOR SALE

CAR AND HOUSEHOLD GOODS, 1991 Honda Ballade, white 4-door, 133,000km, good condition, asking $6500. Also selling Hoover 5kg washing machine $725, 51cm NEC TV (1 yr old) $425, large desk $35, white wooden table $35; wooden chairs $50 for 3; ironing board $10. Phone Steffanie on 9380 2707 or ssccot@geog.uwa.edu.au.

VOLO 360 GLT 1985, 5-door hatch, 5 speed manual. One lady owner since new. Runs well, clean, reliable, mechanically sound, service history, registered to Sept. Cheap, reliable motoring, $3500 ono. Phone ext. 3312 or 9322 3460.

TO LET

SOUTH SCARBOROUGH, villa 3 brms, lounge, dining, aircon., retic. from a bore, just painted throughout, unfurnished, $220.00 pw, one of four with own street address and garage and small garden. Ring Sue Lewis on 2116.

SOUTH PERTH, Peninsula Iocn, 3-bedroom apartment, carport, views from the balcony, quiet location, close to river, city and trans. 5 Melville Place, $185, tel. 9386 6139.

NEDLANDS, Park Road, $250/week, double storey front town house with private courtyard and glorious northern/winter sun. Refurbished with terracotta tiles granite/timber look, deluxe kitchen and imported live appliances. Comprising 3 bedrooms, formal lounge, separate dining. 2 WCs, a/c conditioning, storage room and carport. Close to transport, QEI, SCGH, CSIRO, UWA and Hampden road cafes and restaurants. Available in July. Contact 9381 0817 or yogesan@cyllene.uwa.edu.au.

Redundant Equipment for Sale

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PRICE</th>
<th>AGE</th>
<th>COND.</th>
<th>DEPT.</th>
<th>CONTACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 x Maxtor 100GB Hard disk, Sarotech Firewire Case (USM &amp; Firewire), built-in power-supply.</td>
<td>$390 ono</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>Toby Port 7974 or Shana Davies 7207</td>
</tr>
<tr>
<td>5 x Maxtor 120GB Hard disk, Sarotech Firewire Case (USB &amp; Firewire), built-in power-supply.</td>
<td>$410 ono</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>Toby Port 7974 or Shana Davies 7207</td>
</tr>
<tr>
<td>Dell Latitude CP x Notebook purchased Dec 2000. Linux</td>
<td>$1500</td>
<td>2</td>
<td>3-4</td>
<td>SEG</td>
<td>Grant Kennedy ext 3372 or email: <a href="mailto:keady@maths.uwa.edu.au">keady@maths.uwa.edu.au</a></td>
</tr>
<tr>
<td>Trailer 6 x 4</td>
<td>Offers</td>
<td>20</td>
<td>3-4</td>
<td>SEG</td>
<td>J Williamson 2677</td>
</tr>
<tr>
<td>Trailer 7 x 4</td>
<td>Offers</td>
<td>20</td>
<td>3</td>
<td>SEG</td>
<td>J Williamson 2677</td>
</tr>
</tbody>
</table>

Bids should be accepted by Monday 15 June with schools to have first option

Schools are reminded that all University equipment available for sale must be advertised in the UWAnews. Receipts should be PeopleSoft account coded 490 (computing with barcode), 491 (non-computing with barcode) or 493 (items with no barcode). If equipment has an existing barcode please contact extension 3618/2546 for details.

CONDITION refers to the general condition of item ( 1 = as new; 2 = good; 3 = serviceable; 4 = unserviceable). AGE refers to the nearest year.