Diving insect regulates buoyancy: world first

A University of Adelaide PhD physiology researcher has discovered a world first: a diving insect that can regulate its buoyancy in water, just like a scuba diver.

The findings of Phil Matthews, 24, in relation to the backswimmer (*Anisops deanei*), were published in the prestigious international science journal, *Nature*, last month.

Considered the bible by scientists the world over, publication in the weekly journal guarantees instant respect from academic peers around the globe.

Yet, when Mr Matthews submitted the findings of his research in January, he was convinced “it would trickle down the tree and get buried under hundreds of other submissions”.

Instead, his paper was accepted by *Nature* and published on 9 May, immeasurably boosting the young physiologist’s career prospects on an international scale.

The paper discusses a significant finding in the physiology world relating to the backswimmer. It appears that these bugs use haemoglobin-containing cells in their abdomen to supply oxygen and regulate their buoyancy, a quirk of nature unique to backswimmers.

It allows these insects to remain poised in the water for around four minutes without having to surface for oxygen – something that no other insect in the world can do.

Mr Matthews and his PhD supervisor, Professor Roger Seymour from the Environmental Biology faculty, made the discovery by placing a submerged backswimmer on a sensitive weight balance and measuring the oxygen level inside its bubble.

Foraging insects sport an over-inflated bubble filled with nitrogen and oxygen when embarking on a dive, but the effort of dragging this buoyant cargo downwards through the water quickly uses up oxygen.

“Carrying a bubble when you are a tiny insect means you are going to be very buoyant. If you are not clinging to the bottom, or swimming very hard to stay submerged, you are going to be shooting straight to the surface,” Mr Matthews explained.

“A bubble of air carried by a diving insect is always going to be shrinking. About 20% of the bubble’s volume is oxygen, so as the insect respires the oxygen the bubble will inevitably shrink.

“Simultaneously, nitrogen in the bubble dissolves into the water, further shrinking the bubble. Without a stable bubble volume a stable buoyancy cannot be achieved.”

story continued on page 5
From the Vice-Chancellor

Last month, the University conducted its annual off-shore graduation ceremonies which really are among the most enjoyable functions I attend in the course of the year. They are a unique time to celebrate old and new friendships alike, and to share in a defining moment for our graduates, their families and their friends.

Across four ceremonies held in Singapore, Kuala Lumpur and Hong Kong, I was once again struck by the importance of our work as an international educator, and the contribution foreign students make to our University, both here and abroad. On the cusp of new careers, these graduates are now equipped with skills to make their mark on the world. Along the way, they will carry the University’s name with them. I feel sure that their international experience will stand them in good stead, and their future employers will reap the benefits of a more rounded education.

The international experience is a rich and rewarding one, and not just for those who leave their shores to live and study in Adelaide. In reciprocal fashion, the University is intent on sending our students to high quality universities overseas for part of their studies. Being exposed to other cultures, schools of thought and different perspectives offers enormous gains for both students and prospective employers and helps the University cement ties with tertiary providers in other countries.

While in Asia for the offshore graduations, I signed an agreement with the prestigious Tsinghua University in Beijing to establish twinning programs in commerce, economics and finance. We will have a modest presence on-site at Tsinghua from 2007 onwards, and the local authorities and both students and prospective employers and helps the University cement ties with tertiary providers in other countries.

In Asia for the offshore graduations, I signed an agreement with the prestigious Tsinghua University in Beijing to establish twinning programs in commerce, economics and finance. We will have a modest presence on-site at Tsinghua from 2007 onwards, and the local authorities are clearly enthusiastic about growing the relationship.

The pace and scale of change in China is nothing short of incredible. The economy is growing at an amazing rate, and as much as anywhere else, research of the highest quality, much of it conducted in the leading research universities, is regarded as fundamental to economic health. Tsinghua, the first ranked university in China, and we have a remarkable opportunity to participate in a “world’s best” field of on-site collaborators. We have been asked to signal our interest in participating by the end of the year. It’s going to be a busy time.

The University has also signed a Memorandum of Understanding with the State Government in Kuching to develop research programs in areas of joint interest including agriculture, biotechnology, aquaculture, environmental biology, functional genomics, soil science and water resource management.

While in Singapore, I attended a local Alumni Chapter function at which the Chancellor launched a commemorative book documenting the history and achievements of many high profile Singaporean identities who have studied at the University of Adelaide.

The book, The Southern Light – Enlightening and Enriching, records the collective accomplishments of the Singaporean alumni, covering a 60-year period and includes excerpts from some highly distinguished citizens who are recognised internationally in their fields.

Internationalisation is here to stay. Australia’s involvement in international education, both as a major exporter, and in the encouragement of Australians to learn about other countries and have experience abroad, is enriching society as a whole, the institutions that underpin this huge enterprise, and the hundreds of thousands of people who make them up. To ensure the experience of internationalisation is as good as it possibly can be is an ongoing process, but it is in one in which we must succeed. After all, our students and graduates are our greatest accomplishment – and our best ambassadors.

PROFESSOR JAMES A. McWHA
Vice-Chancellor and President

Barr Smith Library Appeal

The Barr Smith Library Annual Appeal is on for 2006. Now in its fifth year, the Appeal is a vital way of raising funds for one of the University’s most treasured – and utilised – resources.

“The Appeal funds allow us to maintain our status as the major research library in South Australia and one of the major ones in Australia,” said University Librarian Ray Choate.

As a resource utilised by staff, students, alumni and the wider community alike, Mr Choate believes it is important for the Barr Smith Library to maintain a well-rounded collection.

“The Library appreciates having the ability to acquire introductory and research study materials outside the immediate needs of student courses and research priorities,” said Mr Choate. “In this way we can maintain a ‘rounded’ collection which allows students, staff and alumni users to find information on a wide range of disciplines, including current events. The Appeal funds are very useful in achieving these ends.”

Use the last days of the financial year to make a real difference to the Barr Smith Library – all gifts received before June 30 will be eligible for tax-deductibility for the 2006 financial year.

If you would like to contribute to the Appeal, please contact the Development and Alumni office:
Email: development@adelaide.edu.au
Phone: (08) 8303 4994
Fax: (08) 8303 5808
Website: adelaide.edu.au/alumni/giving/appeals/barrsmith/
Lifting university participation

Reputation

The University of Adelaide has turned to its own students to help attract other young people into the higher education sector using an innovative web-based campaign.

The University is building on its successful and award-winning Life Impact advertising campaign—this time focussing on current students rather than graduates, with the stories produced by students.

University of Adelaide Acting Vice-Chancellor Professor Fred McDougall said: “The objective of our advertising has always been to encourage participation in higher education by demonstrating the beneficial outcomes of a university education generally and a University of Adelaide education specifically. Market research by independent research company Colmar Brunton Intelligence showed a significant number of those surveyed after our earlier campaign believed the main message was more about university or education in general rather than just about the University of Adelaide. That’s an important message for us which we want to carry through into this campaign.”

In “Life Impact on Campus”, Bachelor of Media students studying video production have produced 12 short films about students, researchers and lecturers at the University to provide a student view of what life is like at university, filmed in hand-held ‘handy-cam’ camera style.

The films are part of a new website www.adelaide.edu.au/lifeimpactoncampus launched last week. Feedback from this site will help identify which films should be developed into broadcast television commercials.

Other Media students, doing multimedia production, have contributed to the design of the website and assisted with film shoots and documentation. They will run a feedback site managing chat about the films, student life and the University, and will promote the website through email networking.

The University’s Director of Marketing and Strategic Communications, Mr Michael Neale, said: “The Life Impact campaign has been very successful to date in achieving both our primary objective of highlighting the outcomes of studying at the University of Adelaide and our secondary objective of encouraging higher education participation. But we did not want to be complacent. We wanted to move forward with the concept, finding a new and creative way to make Life Impact even more relevant to a younger audience. We also wanted people to see what university life was really like from the perspective of the students.”

In 2004, the Life Impact campaign won an Australian Marketing Institute award for marketing excellence in the category of branding in South Australia. Life Impact told the stories of highly successful graduates and the impact they had on the community and the world.

“Now, as a student-focused institution, it’s highly appropriate that we get students to tell their own stories and those of their friends, colleagues and lecturers,” said Mr Neale.

Story by Robyn Mills

Life Impact on Campus

Help us select the best of 12 testimonials filmed by our students to become advertisements for broadcast television.

Visit www.adelaide.edu.au/lifeimpactoncampus to vote for your choice and you could win an Apple computer package, including a Dual-Core 2.0GHz processor (M9590X/A), 30” Cinema High Definition monitor (M91979X/A), and Final Cut digital film editing software (MA2852/A). Total value of package: $9432.50.

For full terms and conditions visit adelaide.edu.au/lifeimpactoncampus

Entries open on Monday 15 May, 2006 and close at 4pm (CST) on Friday 16 June, 2006. The prizewinner will be notified by email. The name, suburb and state of residence of the winner will be published in The Australian on Monday 26 June, 2006.

The competition is being conducted by the University of Adelaide, South Australia 5005, ABN 61249878937. Vic permit number: 06/1597; NSW permit number: TPL 06/04939; ACT permit number: TP06/1865.

Although voting will influence the choice of testimonials to be made into an advertisement, the final selection is at the discretion of the University. There is no guarantee that the testimonial receiving the highest number of votes will be selected to be made into a television advertisement.

The University of Adelaide www.adelaide.edu.au
Roseworthy explores feasibility of state’s first vet school

Animal Science

The University of Adelaide will investigate whether it is feasible to establish a veterinary science school at Roseworthy – the first in the state’s history.

Director of the Roseworthy Campus, Professor Phil Hynd, said the University was keen to address the serious shortage of rural-based vets in South Australia and support the growth of new animal industries.

“There is a strong demand for more rural vets in the state. Also, the emergence of new animal industries, such as aquaculture, requires vets trained in diseases of farmed seafoods. We want to be in a position to satisfy and meet those needs,” Professor Hynd said.

South Australia is the only mainland Australian state that does not offer a veterinary science degree, despite strong demand from high-quality, local school-leavers.

Professor Hynd said South Australians had always been forced to study veterinary science interstate and many did not return after the completion of their course.

“Previous attempts to establish a vet science school here have been unsuccessful because of a perceived lack of demand for more urban-based vets,” Professor Hynd said.

When Murdoch University established a veterinary science facility in Perth in 1975 it guaranteed to take 12 interstate applicants per year, including South Australians, Professor Hynd said.

“This happened for a few years, after which the pledge was abandoned.”

Since 2003, two new vet schools have opened – at James Cook University in Queensland and Charles Sturt University in NSW.

If successful, the first intake of students into a veterinary science school could start in several years time, Professor Hynd said.

“It will take substantial preparation work, lobbying, and approval from the Department of Education, Science and Technology before we can start developing the infrastructure, staffing and purchase of a vet clinic.”

The feasibility study will look at unique veterinary demands for SA, changes in the supply and demand for vets in the future, changes in the animal industries sector and an increase in demand for training of overseas, full-fee paying students from Asia and the USA.

Animal Science

Story by Candy Gibson

Boost for nursing

Nursing

Professor Alan Pearson, an internationally acclaimed champion of evidence-based health care, has taken up the role of Professor of Nursing at the University of Adelaide.

He will also continue his work as executive director of the Joanna Briggs Institute. Professor Pearson was Head of the University’s Department of Clinical Nursing when he launched the Joanna Briggs Institute in 1996 as a joint venture between the university and Royal Adelaide Hospital.

The Joanna Briggs Institute is an international research and development unit, which seeks to promote the translation and utilisation of the “best available” evidence from a diverse range of sources into contemporary health care practice.

Professor Pearson will lead the Discipline of Nursing’s research with the establishment of a Joanna Briggs Research Unit within the School of Population Health and Clinical Practice.

Meanwhile the University’s new Bachelor of Nursing degree is off to a good start with 50 students in its first year.

Adelaidean caught up with the nurse students during a practical class at the Royal Adelaide Hospital just before the cohort went three separate ways to continue their studies within the hospital environment at the Royal Adelaide, Queen Elizabeth and the Lyell McEwin Hospitals.

Story by Robyn Mills

Boost for nursing

Nursing

Professor Alan Pearson, an internationally acclaimed champion of evidence-based health care, has taken up the role of Professor of Nursing at the University of Adelaide.

He will also continue his work as executive director of the Joanna Briggs Institute. Professor Pearson was Head of the University’s Department of Clinical Nursing when he launched the Joanna Briggs Institute in 1996 as a joint venture between the university and Royal Adelaide Hospital.

The Joanna Briggs Institute is an international research and development unit, which seeks to promote the translation and utilisation of the “best available” evidence from a diverse range of sources into contemporary health care practice.

Professor Pearson will lead the Discipline of Nursing’s research with the establishment of a Joanna Briggs Research Unit within the School of Population Health and Clinical Practice.

Meanwhile the University’s new Bachelor of Nursing degree is off to a good start with 50 students in its first year.

Adelaidean caught up with the nurse students during a practical class at the Royal Adelaide Hospital just before the cohort went three separate ways to continue their studies within the hospital environment at the Royal Adelaide, Queen Elizabeth and the Lyell McEwin Hospitals.

Story by Robyn Mills

Nurse student T erry Devine makes a bed around ‘patient’ and fellow student, Carley Manhire

Story by Robyn Mills

Nurse student T erry Devine makes a bed around ‘patient’ and fellow student, Carley Manhire

Story by Robyn Mills

Nurse student T erry Devine makes a bed around ‘patient’ and fellow student, Carley Manhire

Story by Robyn Mills
“The aim of the modelling was to set biologically realistic parameters for head and neck tumours and try to find the optimum treatment schedule, which is one of the biggest challenges facing oncologists,” Dr Marcu said. “I grew a virtual tumour and combined both radiotherapy and chemotherapy, concluding that daily doses of the drug cisplatin are more effective than administering it weekly, which is the current form of treatment. “Head and neck tumours are rapidly proliferating tumours, which actually accelerate once treatment has started. During treatment when they realise they are losing cells, they respond by growing more rapidly, making them extremely difficult to treat. “Also, 30% of head and neck tumour cells are hypoxic (lacking in oxygen) and thus resistant to radiation. This presents a tough challenge for oncologists.” Dr Marcu said international trials of the drug cisplatin had proved inconclusive in the past. “Unfortunately, there is a lack of factual data in the radiobiology field which makes it difficult to determine optimum treatment schedules for different conditions. I wanted to do some research that corrected this.” Another stumbling block for oncologists is the refusal of most head and neck tumour patients to comply with treatment conditions. “The majority won’t give up smoking during the course of the treatment. Experimental data shows that tobacco can reduce the oxygenation level of cancerous cells by another 30%, yet even this doesn’t act as a deterrent.” Dr Marcu said virtual modelling offered great potential for health research because it could be adapted to suit new parameters. “Modelling is an important tool for oncology and cancer research because you can continue to update the model when new information becomes available.” Story by Candy Gibson

Diving insect regulates buoyancy: world first

Backswimmers overcome these problems by carrying extra oxygen reserves in their haemoglobin, stored in their abdomen. It means they can carry a much smaller bubble, and by releasing oxygen from the haemoglobin into the bubble, can regulate its volume to stop it shrinking. “This buoyancy system is unique amongst all creatures,” Mr Matthews said. “This finding shows that evolution can produce the most unexpected solutions to a problem, in this case using haemoglobin in an entirely unique way.”

On a human level, the backswimmers replicate the same effect as a scuba diver’s buoyancy vest, which allows them to hover weightless in the water. “Like many of the best inventions, the animal kingdom got there first,” Mr Matthews said. He said entomologists had been aware of the correlation between haemoglobin and neutral buoyancy in backswimmers since the early 1900s, but this was the first successful experiment to directly measure the buoyancy and oxygen levels. Story by Candy Gibson
The great Australian backyard is under threat – and that could spell disaster for our children and our health.

University of Adelaide biodiversity expert Professor Chris Daniels says the lack of gardens in new housing developments is a worrying urban trend.

"People are raising families in very sterile and antiseptic environments and our kids are at risk of growing up without environmental values," he says.

Professor Daniels, from the School of Earth & Environmental Sciences, says planners are forgetting the big picture in urban areas.

"Most new housing developments have very little garden area. This presents two problems: it limits the number of birds and plants that inhabit the environment; and it removes an incentive for families to exercise.

Professor Daniels says raising children in a concrete environment might well stunt their environmental creativity and inquisitiveness. "It is certainly not healthy."

A University of Adelaide student with a passion for international politics has been awarded a prestigious Hawker Scholarship.

Northern Territory-born Rhiannon Pulford, 19, is enrolled in a Bachelor of Law and International Relations double degree at the University of Adelaide. She has taken up residence at St Mark’s College.

Rhiannon is one of six recipients of the 2006 Charles Hawker Scholarships, valued at up to $60,000 over four years.

She was presented with her scholarship certificate at a function at St Mark’s College in April by the Speaker of the House of Representatives, Member for Wannon and Hawker family member, the Honourable David Hawker MP.

Rhiannon has an outstanding academic record, achieving a Tertiary Entrance Rank (TER) of 99.8 in 2004 from Kormilda College in Darwin.

She was presented with her scholarship certificate at a function at St Mark’s College in April by the Speaker of the House of Representatives, Member for Wannon and Hawker family member, the Honourable David Hawker MP.

Rhiannon Pulford is flanked by Master of St Mark’s College, the Hon John Bannon, and Speaker of the House of Representatives, the Hon David Hawker MP.

"There are good reasons for building low maintenance communities for the elderly, but not for younger communities."

The biodiversity academic attributes the loss of large numbers of flora and fauna in Adelaide’s inner city areas to extensive clearing for housing developments.

"The more we simplify our environment, the less species will be able to inhabit it."

Professor Daniels cited the parklands as an example: "If you walk through the parklands you will only see about eight or ten species of birds. Yet if you cross the roads to the garden suburbs of Parkside or Rose Park you will see about four times the number of species. That’s because these suburbs have gardens, more flowers and a much more complex environment."

Sections of the parklands could be developed to suit Adelaide’s climate and bring back more native plants, birds, bats and butterflies, he says.

"There are good reasons for building low maintenance communities for the elderly, but not for younger communities."

The biodiversity academic attributes the loss of large numbers of flora and fauna in Adelaide’s inner city areas to extensive clearing for housing developments.

"The more we simplify our environment, the less species will be able to inhabit it."

Professor Daniels cited the parklands as an example: "If you walk through the parklands you will only see about eight or ten species of birds. Yet if you cross the roads to the garden suburbs of Parkside or Rose Park you will see about four times the number of species. That’s because these suburbs have gardens, more flowers and a much more complex environment."

Sections of the parklands could be developed to suit Adelaide’s climate and bring back more native plants, birds, bats and butterflies, he says.

"Most new housing developments have very little garden area. This presents two problems: it limits the number of birds and plants that inhabit the environment; and it removes an incentive for families to exercise.

Professor Daniels says raising children in a concrete environment might well stunt their environmental creativity and inquisitiveness. "It is certainly not healthy."

A University of Adelaide student with a passion for international politics has been awarded a prestigious Hawker Scholarship.

Northern Territory-born Rhiannon Pulford, 19, is enrolled in a Bachelor of Law and International Relations double degree at the University of Adelaide. She has taken up residence at St Mark’s College.

Rhiannon is one of six recipients of the 2006 Charles Hawker Scholarships, valued at up to $60,000 over four years.

She was presented with her scholarship certificate at a function at St Mark’s College in April by the Speaker of the House of Representatives, Member for Wannon and Hawker family member, the Honourable David Hawker MP.

Rhiannon has an outstanding academic record, achieving a Tertiary Entrance Rank (TER) of 99.8 in 2004 from Kormilda College in Darwin.

Her exposure to local, Northern Territory and international politics through the Darwin City Council, the last Northern Territory elections and various United Nations Organisations has fired her political passion.

In 2005, Rhiannon took a gap year to work as an administrative assistant for the Police, Fire and Emergency Services Training College, a data input officer for the Criminal History and Warrants Unit, and an administrative assistant for the Leader of the Opposition in the Northern Territory.

As well as her outstanding success, Rhiannon has been actively involved in numerous extracurricular activities. These include working with youth, the United Nations, fund raising and business interests.

"By any measure, Rhiannon is a high achiever," said Mr Hawker. "She has the intellect, energy, capacity and ability to achieve whatever she determines to do in the coming years."

"Australia needs more people with her ideals, capability and commitment," Mr Hawker said.

The Charles Hawker Scholarships perpetuate the memory of one of Australia’s most respected pastoral pioneers, Charles Allan Seymour Hawker.

Since 1991, the trustees have awarded more than $2.5 million to 56 young Australians.

"Each of these recipients has already displayed a strong commitment to the ideals upon which the Charles Hawker Scholarship is founded. They are gifted scholars with inquiring minds and have already contributed to the wider community," Mr Hawker said.

Story by Candy Gibson
Dereke Bruce is a citizen of the world in every sense. The New Zealand chef lives in Taiwan, has just completed a Masters degree on-line from the University of Adelaide, and last month he travelled to Hong Kong for his graduation.

As the holder of a Le Cordon Bleu Master of Arts in Gastronomy, Dereke is now qualified to teach culinary skills after 25 years in the industry.

It’s a journey that has taken him from New Zealand to Shanghai, and now Taiwan, where he lives with his wife and two children, running a delicatessan/bakery and an Italian restaurant in the bustling city of Taichung.

Somehow he managed to find time, sandwiched between his family and work responsibilities, to churn out two 500-word essays every week for 12 months.

“I love cooking, but I was at a stage in my life where I needed to use my brain more and plan for the future. After searching on the Internet I found this program on Gastronomy at the University of Adelaide. The content was excellent and the course offered a lot of flexibility,” Dereke said.

Under the tuition of the Gastronomy program manager, Dr Barbara Santich, Dereke did his thesis on the changes to Taiwanese food habits in the last 20 years.

“The biggest changes include the introduction of bread and cakes to their diets and the inclusion of raw food. Bread has replaced rice as a staple food for breakfast in Taiwan. People are also becoming more adventurous and trying foods from other countries.”

Dereke does foresee some problems for the Taiwanese ahead, however, if they fully embrace the Western diet at the expense of their traditional foods.

“Up until very recently, the Asian diet was predominantly two thirds carbohydrate and one third protein. It is now about 50/50 and that protein component is bound to increase with the emphasis of meat in the Western world. This will inevitably lead to obesity and you can already see signs of this in Taiwan.”

The Gastronomy program covered a whole range of culinary issues, including the history and sociology of food, contemporary eating habits and the globalisation of food.

“I enjoy the culture behind food and that is why I can cook so many different dishes. The on-line course actually started out as a hobby because I felt I needed to use my brain, but it may very well end up being my security ticket to the future. I can teach for longer than I can cook, so this qualification might give me an income for the last 10 years of my working life,” Dereke said.

After leaving New Zealand, Dereke built an impressive culinary reputation with the Sheraton Hotel chain, working in Shanghai and Taiwan.

He then helped open the Westin Hotel in Taipei, which features 12 different restaurants, before taking on another project, teaching culinary art.

In 1994, Dereke opened Finga’s Base Camp, a delicatessan/bakery, and an Italian restaurant, Finga’s, in Taichung.

The first name reflects the experiences of many of his customers – “a lot of people who come to Taiwan for the first time try out my deli and bakery. I set them up and they launch their travel adventure from here.”

Dereke was one of 73 people to graduate at an offshore ceremony at the Grand Hyatt Hotel, Hong Kong, on 30 April.

Story by Candy Gibson
A stint in compulsory national service helped blaze an educational trail for Singaporean Lester Leong, which led all the way to Adelaide in 2004, helping to launch a prestigious career.

While serving his military training, Lester undertook a two-year undergraduate Bachelor of Computer Science (BCS) degree at the University of Adelaide, studying part-time through the Ngee Ann-Adelaide Education Centre’s offshore program.

The 26-year-old computer science researcher then spent 12 months in Adelaide in 2004, completing his Honours and making history as the first Ngee Ann-Adelaide Education Centre student from the BSC course to finish his education at the North Terrace campus.

“It was a very exciting time in Adelaide. It was a bit scary at first because I felt people had high expectations of me, being the first Ngee Ann-Adelaide Education Centre student in the BSC degree to travel to Adelaide to do my Honours,” he said.

“I also took a risk electing to study part-time through the Ngee Ann-Adelaide Education Centre because employers in Singapore generally do not approve of part-time courses.

“However, I did my homework on the computer science courses and decided that the University of Adelaide offered the best offshore program. They had fairly stringent requirements and the lecturers were very experienced, so I felt secure that the degree would be highly regarded. Hence, I decided to forgo my placement at the National University of Singapore.”

At the University of Adelaide, Lester gained expertise in grid computing, which on his return to Singapore helped land him a job with the prestigious Agency for Science, Technology and Research (A*STAR) - Institute of High Performance Computing.

Lester works in the high-end research field for software computing, specialising in grid computing. He is part of an internationally trained team, which has brought its own rewards.

“The good thing about A*STAR is that I am working with people from different countries and because it is a research field, people are trained to think differently. The overseas experience has helped me to look at things from a different perspective.”

Lester is keen to work in Australia at a later stage, but for the moment Singapore’s booming economy offers promising career prospects for the young researcher.

“Singapore is a fast-paced country. We are trained to excel and to always strive to be the first and the best. We are a small country with very few natural resources, so we rely on human resources to position ourselves in the forefront of new technology.”

Story by Candy Gibson
Malaysian scholar Naem Azmi has an unusual passion for an English teacher. He’s obsessed with heavy metal music and its relevance to literature.

The 28-year-old lecturer recently graduated from the University of Adelaide with a Master of Arts in Applied Linguistics. He was one of 23 students to receive their parchments at an offshore graduation ceremony in Kuala Lumpur on 23 April.

Naem hopes to use his qualification to help research the correlation between heavy metal music and the English language.

“I started to explore heavy metal music in 1994 and realised it conveys a lot of different meanings,” he said.

“Its strength lies in its range of vocabularies, the stress patterns of pronunciation, the articulation styles and grammatical constructions. Some sub-genres of heavy metal also carry strong literary influences.”

Naem is hoping to discover certain parallels between heavy metal and the English language, including how non-literary, factual lyrics can be used to convey meanings to an audience.

“For example, the Rage’s ‘Enough is Enough’ (Trapped 1991) takes a look at the tendency of modern society to engage in war. The title itself suggests that the speaker is fed up with war.”

Heavy metal lyrics have also expanded Naem’s vocabulary.

“When I was younger, apart from reading books I read lyrics to find out what bands were singing about so that the content didn’t clash with my personal, religious and moral values. I avoided satanic black metal bands for that reason.

“In the process I discovered new words such as ‘apathy’, ‘infamy’, ‘disdain’, ‘dismal’ and ‘animosity’.”

Naem currently teaches English at the University Utara Malaysia (UUM), Kedah, and also devotes a large portion of his time to producing quality papers and publications.

“In the months to come, I’ll be one of the few people assigned to teach and supervise Masters students for Applied Linguistics in UUM,” he said.

“It goes without saying, you can’t teach what you don’t know. I believe my experience at the University of Adelaide will undoubtedly assist me in explaining to students the core of semantic applications to languages.”

Naem is no stranger to foreign experiences. In 2000 he gained his Bachelor of Arts (English) from the Southern Illinois University in the United States.

After that he worked for a private college in Johor Bahru, teaching basic English grammar to students before applying for a tutorial post at UUM. That position has just been upgraded to a lecturer’s post.

“I’m hoping to get my PhD next and then pursue the heavy metal correlation with the English language because it’s an area I am really interested in,” he said.

Naem spent 18 months studying at the University of Adelaide with his wife, Mazura Jamali, who also completed her Master of Arts in Applied Linguistics.

“It was a privilege studying there and it has been a huge help to my career,” Naem said.

Story by Candy Gibson
Forensic dentist helps identify bodies

Identification of bodies through forensic dentistry will now be more efficient, thanks to the international work of Malaysian dentist Dr Mohd Fadhli Khamis.

Dr Khamis, who works at the Universiti Sains Malaysia (USM), has just completed his PhD at the University of Adelaide, researching dental variation in Malaysian populations.

His research will help police and authorities identify bodies, using tooth size and morphological variations.

Dr Khamis graduated with a PhD in Dentistry from the University of Adelaide in April at an offshore graduation ceremony in Kuala Lumpur.

A father of four children, Dr Khamis is currently based in the School of Dental Sciences at USM, where he lectures in oral biology and is involved in the Craniofacial Biology Research Group.

“My PhD project was planned to cover two main disciplines: dental anthropology and forensic dentistry. The project will also help develop the expertise of USM’s craniofacial unit within the School of Dental Sciences,” Dr Khamis said.

“The combination of forensic dentistry coursework and the PhD program at the University of Adelaide has provided me with a great balance in terms of teaching, forensic services and research,” he said.

Dr Khamis began his career as a dentist in the Ministry of Health in 1994. In 2000 he joined USM as a trainee lecturer in the School of Dental Sciences and was given a portfolio in forensic dentistry.

Under the academic training scheme, the USM sponsored his studies at the University of Adelaide over a five-year period. Dr Khamis initially did a Graduate Diploma in Forensic Odontology and stayed in Adelaide for his PhD. His research program was also partly sponsored by the South Australian Police.

Story by Candy Gibson
Antony tops up the knowledge tank

Petroleum industry technical and management adviser Antony Corrie-Keilig is on one of the sharpest learning curves of his life but it’s paying dividends, thanks in large part to the University of Adelaide.

The Singapore-based professional graduated with a Master of Applied Project Management (MPM) in April, earning the highest marks in the 2006 Ngee Ann-Adelaide Education Centre cohort.

Mr Corrie-Keilig, 36, believes the Master’s on his resume differentiated him when applying for a position earlier this year with elite international petroleum advisory firm Gaffney, Cline and Associates.

Three months on, Mr Corrie-Keilig is using many of the project management techniques and also the business skills that are integral to the MPM course.

“The Master’s has given me a plethora of practical tools to deal with project management and business-related issues, while at the same time providing a framework to confidently understand the nuances of complex, integrated projects in the petroleum industry,” he said.

Mr Corrie-Keilig has 12 years’ experience in the oilfield, predominantly as a petroleum operations engineer working in the United States, Indonesia, Singapore and Malaysia.

Sydney-born, he was raised in Melbourne and gained his undergraduate degree in Mechanical Engineering from Monash University in 1992 while on an Australian Regular Army (ARA) scholarship.

“I went straight into the military after university and completed postings in Mechanized Infantry and the Corporation of Transport. Within the next three years I learnt a great deal but knew it was time to move forward, as I was seeking a career in the petroleum industry.”

Upon leaving the military Mr Corrie-Keilig pursued that dream, completing a postgraduate diploma in petroleum engineering at the University of NSW.

Mr Corrie-Keilig joined international company Schlumberger Oilfield Services in 1996, and was posted to Alaska in 1998. He moved to Indonesia in 2000 and subsequently to Singapore in 2002. Prior to joining Gaffney, Cline and Associates in 2008 he worked as a project manager for Schlumberger.

“I enjoyed working for Schlumberger immensely; but significant travel resulted in being away from family for extended periods of the year. I was missing seeing my young children grow up. At the end of 2004 I decided to take a year off and focus on my family.

“In Schlumberger I was managing projects, but I came to see in time that I was lacking depth in my practical project management skills. I had the theory, but I needed to understand and effectively manage the ‘big picture’ process.”

Mr Corrie-Keilig’s wife, Erika, saw an advertisement for the Master in Applied Project Management being offered by the University of Adelaide through the Ngee Ann-Adelaide Education Centre.

“I was sold quite quickly, as it was a holistic course with the right combination of theory and practice. It was taught by lecturers who were all experienced in the real world of project management and who had scars to show for it.

“The greatest learning benefit for me was the ability to select sections of failed projects that I had been involved in and re-work those sections with the skills I had acquired in the form of assignments.

“These facets attracted me over other institutions that offered Master’s courses in Project Management in Singapore.”

The University of Adelaide’s inclusion in the Group of Eight (Australia’s leading universities) also proved a big drawcard.

Candy Gibson
A commemorative book has been launched documenting the history and achievements of many high profile Singaporean identities who have studied at the University of Adelaide.

The book records the collective accomplishments of the Singaporean alumni from the University of Adelaide, covering a 60-year period. It includes excerpts from Singapore’s first elected President, the late Mr Ong Teng Cheong, the former Deputy Prime Minister, Dr Tony Tan, and the Second Minister for Finance and Foreign Affairs, Mr Raymond Lim.

The Chancellor of the University of Adelaide, the Honourable John von Doussa, launched The Southern Light – Enlightening and Enriching at an alumni dinner in Singapore in late April.

The commemorative book, produced by the Adelaide University Alumni Association (Singapore), is the first publication of its kind published by an Australian university alumni chapter.

Congratulating the University on the book, the Australian High Commissioner to Singapore, Mr Miles Kupa, said: “The commemorative book contains the personal reflections of a number of prominent Singaporeans who studied at the University of Adelaide. I am heartened to acknowledge that a number of people featured in the book now hold senior positions in Singapore’s public and private sectors and have made significant contributions to Singapore.”

More than 50 graduates have contributed articles to the commemorative book, amongst them Dr Tony Tan, Mr Raymond Lim, Mr S. Iswaran (Deputy Speaker of Parliament), Mrs Lim Siok Peng (former Private Secretary to the later former President, Mr Ong Teng Cheong) and Dr Cheong Choong Kong (Overseas Chinese Banking Corporation Chairman).

When Mr Ong Teng Cheong was Minister for Transport he developed the Singapore Mass Rapid Transport System together with the late Mr Lim Leong Geok, another University of Adelaide alumnus who graduated in engineering.

During the course of the MRT project, the team members comprised mainly University of Adelaide engineering graduates and their contribution to Singapore’s transport system is outlined in a chapter in the book.

International Alumni

A commemorative book has been launched documenting the history and achievements of many high profile Singaporean identities who have studied at the University of Adelaide.

Historic chapter in University’s history

Pictured at the launch of The Southern Light are (left to right): Michael Llewellyn-Smith (Chair of the Alumni Association), David Goh (President of the Adelaide University Alumni Association Singapore), Dr Margaret Tan, the book’s editor, Chancellor of the University of Adelaide, the Honourable John von Doussa, and Vice-Chancellor, Professor James McWha.

Photo by Lawrance Wong

Story by Candy Gibson
Chancellor, Professor McWha, said. "Beyond the Cloisters: University Exploration & Discovery" features the early exploration work of 10 distinguished University of Adelaide staff.

"Beyond the Cloisters" showcases documents, maps and photographs from the likes of naturalists Ralph Tate and Frederic Wood Jones, anat果断ist Sir Edward Stirling, botanist T.G.B. Osborn, pathologist Sir John Cleland, musician E. Harold Davies, dentist Thomas Draper Campbell, physiologist Sir Cedric Stanton Hicks and geologists Sir Douglas Mawson and CT Madigan.

All of these men, who lectured at the University of Adelaide in various disciplines, undertook expeditions into remote regions of South Australia, helping to document and map the state for both geological and scientific purposes.

"The achievements of these expeditions should not be underestimated," the Vice-Chancellor, Professor McWha, said. "Apart from recognising the work of these intrepid academics, this exhibition is also a tribute to the vital work of Special Collections and the University’s archives, which provide a direct link to our past."

Many of the expeditions were a tribute to cross-institutional collaboration, with the University of Adelaide working alongside the Royal Geographical Society of South Australia, the South Australian Museum and the Royal Adelaide Hospital.

The personal records of the academics documented in "Beyond the Cloisters" bear witness to repeated requests for leave of absence to embark on various expeditions. These requests were invariably supported by the University, which also contributed financially.

"These academics made considerable contributions to expanding the boundaries of our knowledge, and their work continues to be of significance today.

"The Board of Anthropological Studies collected an astounding amount of data relating to indigenous people which more recently has served to support native title research," Professor McWha said.

"Beyond the Cloisters: University Exploration & Discovery" runs until 23 June.

Story by Candy Gibson
Kevin Marjoribanks, Vice-Chancellor: An Appreciation (1938 - 2006)

Kevin Marjoribanks was Vice-Chancellor of the University of Adelaide from 1987 to 1993. The role of Vice-Chancellors in Australian universities has changed a good deal in the last fifteen years, and many of the changes were already well underway during Kevin’s period of tenure. It was the era of the so-called “Dawkins reforms,” of systemic expansion, institutional merger, and greatly increased management accountability.

Kevin of course willingly and scrupulously took on the unavoidable and important responsibilities of any Vice-Chancellor for such matters as legislative compliance and strategic planning, risk management and public relations, but it never seemed to me that this was the core of the job for him, and I cannot imagine that he would ever have chosen to refer to himself, as many Vice-Chancellors now do, as a CEO. He was the head of a management team by necessity, but where his heart lay, and where he served with great distinction, was in the role of academic leader of the University community.

When I think of Kevin Marjoribanks as Vice-Chancellor, two visual images come strongly to mind. The first is of him seated at the round table of the Council room, in his preferred and symbolically resonant place directly facing the person chairing the meeting, and listening carefully to what others had to say. The second is of him sitting at the head of a dining table, a glass of red wine before him, showing all the skills of an orchestral conductor in eliciting, shaping, and bringing to a satisfying conclusion some vigorous discussion among a group of senior academics.

The two images epitomise, for me, the gracious and inclusive way in which he exercised his leadership, as a colleague among colleagues and a person who listened. Kevin had a genuine respect and appreciation for the multitude of ways in which a contribution (academic or administrative) could be made to the University, but it always seemed to me that his real constituency was the professoriate, and that he was never more in his element than in exercising his role as its leader.

Before, during, and after his term as Vice-Chancellor, Kevin Marjoribanks always strove to maintain the highest academic standards and values, both on behalf of the institution and in his unwavering commitment to his own scholarly work. As a Vice-Chancellor, he was, I think, most strongly characterised by his extraordinary attentiveness to the intellectual life of the University community. He relished open and informed debate (and, a rarer quality, was prepared to accept from time to time being on the losing side of it). In my experience, he always remembered what you were interested in and working on, and he certainly marked every scholarly achievement of any significance (a good publication record for the year, perhaps, or an award of some kind) with a personal note of thanks and congratulation, invariably but perfectly sincerely concluding “With my warmest regards, Kevin Marjoribanks.”

He ran a lively series of inaugural professorial lectures, and he and Jan would follow them up most hospitably with a relaxed and friendly dinner at their home amongst splendidly multi-disciplinary groupings of guests. He regularly held professorial dinners in the Vice-Chancellor’s dining room at the university, and no matter how late they ran (and they did) or how convivial they became (and they did), those attending needed to keep their wits about them, because Kevin ran the dinner conversation like a seminar and a moment’s inattention could leave you floundering when a question was suddenly flung your way. And the final demonstration that Kevin was always and above all a professorial Vice-Chancellor was, of course, that – very unusually – if perhaps not quite uniquely among modern Vice-Chancellors – at the end of his term he returned happily to teaching, research, and the leadership of his department.

In his Vice-Chancellorial Valedictory Address in November 1993, he made very clear his view that the most pressing obligation of universities and those who work in them was, in his words, “to be passionate in their efforts to contribute to scholarship and in the quality of their teaching,” and that passion continued to burn brightly in him until the very end of his career.

Despite his very evident personal modesty, Kevin Marjoribanks brought great professional dignity and notable intellectual authority to his role as Vice-Chancellor. Dignified but never stuffy, reserved but never remote, he was a colleague who commanded respect and earned affection. In my personal dealings with him, I found him wonderfully courteous and unobtrusively kind. His intellectual generosity and extensive experience gave him a sympathetic understanding of the difficult decisions and choices others sometimes had to make, and, though he could be blunt if the situation demanded it, I never heard him make an angry, dismissive or unkind comment about anyone. He cared deeply about fairness and about the opportunities that education could provide for those whose social circumstances put them at a disadvantage. As a leader, he was a discreet mentor; as a colleague, he invariably offered support; as a teacher, he loved to nurture talent; and as a friend, he was warm and hospitable. He brought to all his activities an integrity and a respect for others that will continue to serve as a model for those of us who were his colleagues.

I am sure that I speak for many others at the University of Adelaide when I say that I feel privileged to have worked with Kevin Marjoribanks, and grateful for all that I learned from his great example of unstinting, unselfish commitment to the value of the intellectual life that he cherished and to the well-being of the University that he loved.

Professor Penny Boumelha

A eulogy delivered at St Peter’s Cathedral on Tuesday 2 May
Four inspire with forensic fun

Science

Four young research scientists from the University of Adelaide are hoping their example – and a bit of crime show-inspired forensic fun – will encourage rural high school students to take up a career in science.

PhD students Kelly Bailey, Cadence Minge, Tamara Cooper and postdoctoral research officer Dr Thomas Ohnesorg toured high schools in the Riverland, Barossa and Clare Valley last month as part of the Australian Society for Medical Research’s education outreach program.

Schools became forensic laboratories for a day and pupils conducted their own “Who done it?” using DNA from a simulated crime scene. The researchers also talked about their day-to-day work as research scientists, applying for university courses and student life.

For Tamara Cooper, co-ordinator of the road show, the tour took her back to her own old high school at Riverton. Tamara is pursuing her PhD at CSIRO Molecular and Health Technologies, developing new technologies for looking at protein interactions involved in the action of therapeutic drugs.

Before the tour, she said she was looking forward to talking to school students about the transition from a country school to university.

Kelly Bailey is also working with proteins at CSIRO Molecular and Health Technologies. “Now I have been to University, I can see that science teachers are often restricted by the curriculum which can make it hard to create exciting lessons,” she said. “The outreach program is a chance to not only give students an exciting alternative to normal classes, but to motivate them to want to learn more.”

Thomas Ohnesorg comes from Munich, Germany and is researching ovarian follicular development and function within the University’s Research Centre for Reproductive Health. He gave school students an international perspective on research in South Australia.

Cadence Minge is researching a possible link between excess bodyweight and impaired female reproductive potential, also within the Research Centre for Reproductive Health.

She told students: “Every day I am able to contribute to human knowledge of cell biology without which we would not be able to help those of us who have diseases or are unwell because of problems in the way our cells work.”

Student Services

Fourteen school careers counsellors from key interstate schools recently visited the University of Adelaide to get a first-hand account of what Adelaide has to offer.

The counsellors, from Victoria, New South Wales and Tasmania, also received a taste of student-style living with a night’s bed and breakfast in the University’s new state-of-the-art student accommodation, the Village.

The schools were selected on the basis of having either large populations of international students or a boarding school, both likely to have students more open to a move interstate for university study.

Coordinator of the event, Prospective Students Office Manager Adrienne Lovelock, said:

“School counsellors can be our best allies in helping secondary school students and their families to understand what the University has to offer. The choices students have to make about study and career directions are complex.

“Students coming from other states have additional things to think about – relocating and choosing a place to live that will suit them and help them succeed. If the people helping them to make those choices are familiar with the University and its offerings they can give much better support. Everybody wins.”

This event has helped us make much firmer connections with these key schools. Once you know each other, it is much easier to work together.”

The counsellors heard from faculty staff members on programs of study, various general staff members on student services and they quizzed a panel of current students on their life as a student in Adelaide.

Jon Pollard from St Paul’s International College at Moss Vale, NSW said the University seemed academically “very impressive”, particularly the wide range of subject choices. And on the Village, he said: “It’s a great facility for the students, very user friendly.”

Others were also impressed with the Village. Josie Butera from Maribyrnong Secondary College at Carlton North in Victoria, said: “It had lovely chi! You could just tell by the students who we saw there that it’s a lovely relaxed place with room to study and meet others and to retreat and study alone. The security was excellent, as was the entertainment areas and the location - so close to the Adelaide Market! We were made to feel very welcome.”

Story by Robyn Mills

Volume 15, Number 4 ■ June 2006 ■ Adelaidean
Flute talent wins US scholarship

Third-year Bachelor of Music in Performance student and flautist Amy Ellks has won a full scholarship to a month-long summer school with the National Symphony Orchestra (NSO) in the United States. Amy, just 19 from Heathfield in the Adelaide Hills, is the only Australian to be selected for the Kennedy Center’s NSO Summer Music Institute out of 70 young musicians from around the world.

Head of Woodwind in the Elder Conservatorium of Music, Elizabeth Koch, said: “This is quite a coup for Amy and for the Elder Conservatorium. Amy is one of our most talented students and this is a tremendous opportunity for her. It is this sort of exposure and experience which can really boost a young musician at the start of their career.”

Amy is taught the flute by Elizabeth Koch and Geoffrey Collins, Principal Flute with the Adelaide Symphony Orchestra.

At the Summer Music Institute, Amy will have lessons with an NSO musician, master classes and seminars with music professionals and will meet internationally renowned conductors, soloists and musicians. She will play with the Summer Music Institute chamber orchestra, taking part in two public concerts at the well-known Kennedy Centre Concert Hall and chamber music performances at the Millenium Stage.

Amy started playing the flute when she was just eight – and it would have been earlier but she wasn’t allowed to because she was too small.

“I wouldn’t settle for any other instrument,” says Amy. Since then she has won many awards including the David Cubbin memorial scholarship in 2004 (Flute Society of SA), the Christchurch scholarship in 2005, and she recently performed Mozart’s flute concerto in G major as a soloist with the Elder Conservatorium Symphony Orchestra.

To be selected for the Summer School she submitted a recording and a brief description of why she wanted to attend the Summer School.

“Last year I went away to Europe with Liz and the flute group,” she says. “That experience made me want to travel again, to gain more orchestral experience, and bring what I learn overseas, back into my playing and teaching here.”

Resounding brass success

The Elder Conservatorium of Music recently held a highly successful, three-day ‘Brass Weekend’, from 6 – 8 May 2006. The event was the brainchild of the Conservatorium’s Head of Brass, Mr Howard Parkinson, who is also the Principal Bass Trombonist with the Adelaide Symphony Orchestra.

The event involved the active participation of several hundred young South Australian brass players, accompanied by their school music teachers, from high schools right across the state, including contingents from the Riverland, Mount Gambier, Port Augusta, and the Barossa Valley, as well as a strong showing from schools in the metropolitan region. It was a partnership between the Conservatorium, the Instrumental Music Service (of the State Government Department of Education), and high schools.

Over the three days there was a densely packed programme of concerts, masterclasses, workshops and advice sessions, all designed to assist talented teenagers to tune in to the nature of professional music training, as pursued through the Conservatorium’s training programs at degree and certificate levels.

The final session was a memorable conclusion to the long weekend, as over a hundred participants filled both the stage of Elder Hall, and the acoustic space, with a memorably rousing “mass blow”.

The Director and Dean of the Conservatorium, Professor Charles Bodman Rae, paid tribute to the initiative of Howard Parkinson in putting together such a fun and educationally inspiring event.

“I’d also like to thank the music teachers and the Instrumental Music Service for making this partnership such a literally resounding success.”

Honours showcase at Evening Concert

The Elder Conservatorium of Music Evening Concert Series for 2006 is underway with the first concert to be held on Saturday, 10 June in Elder Hall at 6.30pm.

“Pictures” features the Elder Conservatorium Symphony Orchestra, conducted by Charles Bodman Rae, and showcases two talented Honours student soloists.

The first work in the program is Richard Strauss’ “Horn Concerto No. 1”, performed by Honours student soloist, Katy Hermann.

Graduating Honours Performance student and soprano, Holly Wotton, will sing “Les nuits d’été” by Berlioz. Holly, one of the Elder Conservatorium’s finest young sopranos, is about to embark on postgraduate studies in the UK.

The final work in the concert is Ravel’s stunning orchestration of Mussorgsky’s “Pictures at an Exhibition”.

Tickets to the Concert are $22 adult, $17 concession, $12 student, available from BASS or dial’n’charge 131246.

For the full Evening Concert Series program see www.adelaide.edu.au/events/concert/evening/