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# Toxic sludge research accentuates the positive

So-called 'toxic' sludge which is filtered out of Adelaide's drinking water might not be that dangerous after all, and could actually have some beneficial uses, according to researchers at the University of Adelaide.

Filtration is designed to remove organic matter and clay from the water, as well as harmful microbes, making it both healthy to drink and pleasing to the eye. The process, carried out at filtration plants along the River Murray and in the Mount Lofty Ranges, produces about 15,000 tonnes of sludge every year.

This sludge is produced using alum (aluminium sulphate). Because it contains aluminium the sludge is regarded by the Environmental Protection Authority (EPA) as a "metal hydroxide waste" and under most circumstances the only way it can be disposed of is as regulated landfill, making its disposal both difficult and costly. [There is thought to be some connection between traces of aluminium in the brain and Alzheimer's disease.]

But Dr Cameron Grant from the University of Adelaide's Department of Soil Science (Waite Campus) said studies had shown the aluminium contained in filtered sludge posed little risk to the environment or to human health.

"The justification for this cautious approach to the disposal of alum sludges is therefore questionable," Dr Grant said.



Dr Cameron Grant-research suggests 'toxic' sludge not such a problem. Photo: David Ellis.

"The aluminium content is actually not very high; it's comparable to many of our soils, and aluminium constitutes about 8% of the earth's crust anvway-it's naturally occurring and ubiquitous in the environment.

"With our drinking water, aluminium is largely a non-issue because the chemistry of aluminium is based strongly upon pH levels. At pH levels of about six or seven, all the species of aluminium are virtually insoluble, which means they pose no toxic risk to biological life. Many of our soils are already in that pH range, so the aluminium is highly insoluble.

"The other thing which prevents aluminium posing a problem in the filtered sludge is lime, which is added during the water filtration process. Lime raises the pH level and prevents aluminium from becoming soluble."

Dr Grant said research into this area was started at the University of Adelaide by Professor Malcolm Oades, now the head of the Division of Agricultural & Natural Resource Sciences, more than 15 years ago. With the help of the Urban Water Research Association of Australia and SA Water, several researchers have been continuing his work into the properties and potential benefits of filtered water sludge.

"When applied to soil, the alum sludge has a number of benefits," Dr Grant said. "Previous studies throughout the world have shown that it increases soil pH, improves the physical properties of soil, such as structural stability and water holding capacity, and improves plant performance and yield.

"No problems have been found in terms of elevated contents of aluminium in plant tissues. In all cases, aluminium was actually found to be lower than in plants grown on naturallyoccurring, acidic soils. There is no evidence to suggest that land application of alum sludge poses any environmental hazard with respect to aluminium pollution."

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# Study to improve nursing quality

How do you measure nurses' competence? That's the issue being looked at in a new national study by University of Adelaide researchers.

Headed by Professor Alan Pearson from the Department of Clinical Nursing, the study has been commissioned by the Australian Nursing Council in a bid to improve current methods of evaluating nurses' competence.

Recommendations to come from the study could lead to a greater level of competence and therefore quality of service from nurses throughout Australia, which means safer treatment and better care for patients.

Currently in Australia the most common

# Waite the key to future for olive oil industry

'Green', 'grassy', goes well with fish. 'Peppery', and good with kangaroo. Fine wines? Try olive oil.

The University of Adelaide's Waite Campus is a key player in a push to add a boutique olive oil industry to South Australia's repertoire of gourmet products, and earn export dollars for the State.

Along with collocation partners SARDI and PISA, Charles Sturt University, and an active industry spearheaded by Oltech Pty Ltd and Olives SA, the Waite's Department of Horticulture, Viticulture and Oenology is leading moves to develop a soundly based, high quality olive oil industry which has the potential both to replace oil imports and win

larly in the Adelaide Hills, are descendants of this imported stock, and have adapted so well to their environment that in some areas they are regarded as an agricultural pest.

Now a new breed of entrepreneurs, driven by a passion for excellence and quality in food and wine, is working with research scientists to take the best features of these wild olives and use them as the basis for a new 'boutique' approach to olive oil.

Department Head, Professor Margaret Sedgley, says the Waite Campus is the only research facility in Australia which combines all the elements needed for the projectchemical laboratories for analysis of oil content and quality, DNA testing facilities for genetic characterisation of the wild olives, and a tasting laboratory, originally established for wine, but whose trained staff and facilities are easily adapted to tasting evaluations of olive oil.

ing the fast-expanding industry.

The research team is working towards identifying what suite of compounds makes a particular boutique oil, and what flavour compounds give each oil its special characteristics. The work will provide a sound basis for quality standards for the industry and for consumers.

Professor Sedgley is cautiously optimistic that, this time, the olive industry in South Australia will be a huge success.

"Everything is right this time around. We have very well adapted olive trees, and we know how to identify and propagate superior wild olives. We have a committed and knowledgeable group of industry leaders, and, importantly, the beginnings of a specialty niche market for boutique olive oil.

indicator of nurses' competence is determined by 'recency of practice'. This requires nurses renewing their registration to demonstrate that they have been practising nursing continuously or recently.

The policy is based on the assumption that nurses who have practised in the previous five years will be more competent than those who have not practised for a long time.

But Professor Pearson said serious questions had been raised about this method.

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export markets in its own right.

The emerging boutique industry owes its development both to history and to science.

The olive industry was one of South Australia's earliest agricultural endeavours, based on quality trees brought from the Mediterranean. But cheap olive oil imports, against which the local industry could not compete, meant the industry declined.

The wild olive trees which now grow throughout the State, particu-

Primary Industries South Australia (PISA), also located at Lenswood, initially inspired the HVO team to work on the olive industry as part of its role in supporting agricultural development in the State. There was also a need to offer reliable advice to those considering join-

"In restaurants, we're already dipping our bread into quality olive oils instead of spreading it with butter. Public tastings of olive oil to learn to appreciate their individual characteristics will be next," she says.

The olive oil tasting lexicon is surprisingly similar to wine. Oils may be 'green', 'astringent', 'grassy', 'fruity', 'peppery', and so on.

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Page 2: The Vice-Chancellor's Rhodian thoughts on a provincial university and Charmaine McEachern on media images of Princess Diana. Page 7: October graduation—PhD milestone for anaesthesia specialist.



# Rhodian thoughts on a provincial university

I was startled when reading a review of John Passmore's autobiography in *The Weekend Australian* to come upon the words, refering to the 1940s – "Australian universities were less provincial than they are now ...". What? Had I misread it? With all this talk of going global, with all this interest in internationalisation, I had to be wrong! I read it again. Yes, that's what it said – "less provincial than they are now".

I've thought seriously about that since then, thanks to sleeplessness induced by international travel. In many ways I think it's right. Australian universities do seem to spend time focusing on Australian issues rather than those of worldwide importance. For example, there's more interest in the effects of the budget cuts than in the global communications revolution. While the former are significant, the latter could mean that there will be no need for universities, or at least for universities as we currently know them, as I suggested in my last column. And when Asiaweek identified the University of Tokyo as the best institution in the Asia-Pacific region, Australian universities didn't attempt to benchmark with that university, but turned to each other for inspiration. When establishing relationships outside Australia we tend to look to similarlystructured universities which operate, like us, in English. So we might benchmark with the UK universities and those of the USA. Ah yes, we'll include Tokyo in due course, but first it's important to ....

Of course in the 40s Australian universities probably looked primarily to the UK too, but without even considering the Australian reference points. The postwar rise of a strong Australian national identity in which education is valued has brought with it a self-reliant and (almost smugly?) self-confident Australian higher education system. This has had great advantages. It has led to a well-educated workforce and a flourishing research culture.

But if Stephen Fitzgerald is even remotely right in his new book *Is Australia an Asian Country?*, we must break out of our provincial contentment and inject real meaning into our international focus, making use of the knowledge and contacts of our staff and students. Should we just be teaching in English? How many universities in the non-English-speaking world should we have strong ties with? How many global knowledge consortia for education or research do we belong to? How many have we established?

## Integrally disaggregated

I am sceptical about the explanation of the "disaggregation of vertical integration" offered by the anonymous member of the West committee and reported by the Vice-Chancellor (Adelaidean 22/9/97).

The duties of the academic staff of the University include the preservation and transmission of knowledge and its creation and understanding through scholarship, research, teaching and performance. In the jargon of Governments and managers today, this amounts to vertical integration of the knowledge industry in which the University participates. To disaggregate that integration is to separate those functions so that they can be performed by different providers. In the language of ten years ago it means separating the functions of teaching and research. And most people who use the present jargon want all organisations which provide teaching and/or research to compete on the proverbial level playing field because otherwise the advantages of the privileged obstruct the disaggregation process, so the vertical integration is to be disaggregated in a world of competitive neutrality among the providers.

New providers of tertiary teach-

ing outside the present unified national system may indeed focus on distance education and new technologies to deliver it, and they may or may not choose to have a research function (or a teaching function). The University of Adelaide is properly investigating the ways in which it may most effectively incorporate new technologies into its teaching and is necessarily examining different ways of giving credit for courses provided outside it through credit transfer provisions, exchange arrangements, and so on: the proposal to privatise the Graduate School of Management contemplated outsourcing teaching. This may or may not involve the disaggregation of the vertical integration of its functions; so far it has not. But the disaggregation of vertical integration is not conceptually linked to how universities use new technologies, any more than it is linked to the question of whether we choose to use books and materials produced at this University or elsewhere as the basic reading in any particular course.

In the context of the West review I should have thought it much more likely that the disaggregating member is more interested in continuing to separate research funding from teaching functions and encouraging more competitors into both fields of work. And I would be surprised if

## **GUEST COMMENTARY**

that did not involve concern with a rearrangement of Government subsidies to enable new entrants to compete without disadvantage with the existing providers (the universities). In fact if we confront the issue of disaggregation of vertical integration squarely it may be that just by doing that we are looking at a proposal for the partial disintegration of large parts of the existing system of Australian higher education. No doubt this involves some exciting opportunities, and no doubt in the brave new world it contemour efficient plates and entrepreneurial use of new technologies will be vitally important for our future. But I suspect that its implications for the universities go a long way beyond the creative use of the electronic provision of teaching material and whether the Internet has complemented the printing press and the library in assisting in the transmission of certain forms of knowledge.

Perhaps all this is unduly sceptical of the disaggregating member's explanation. But in my discipline we are sufficiently accustomed to the scepticism of others about our own jargon to be doubtful about the efforts of members of other professions to explain themselves to different laities.

> John Keeler Department of Law

# Death of a Princess: Diana, the media and a postmodern politics

Media have become central ways in which our society tells us stories about ourselves, holding up our cultural understandings for interrogation and reflection. As media coverage of the death of

Princess Diana lessens it is appropriate to ask what exactly happened in that coverage. This piece focuses on the media narratives constructed in the week between her death and her funeral, when the meanings of the death were shaped and honed, providing a form for the continued existence of the myth that was Diana.

Three interrelated themes haunted the words and pictures. First, inevitably, the media and in particular the paparazzi; second, Diana's celebrity; and third, the institution of royalty itself. Diana's star image and persona link all three themes and give a critical edge to reflections on the politics of royalty.

### LA DOLCE VITA: DIANA AND THE PAPARAZZI

The manner of Diana's death, apparently being chased by paparazzi, was almost the first thing to capture attention. This produced a curiously polarised effect where newspapers and television programs talked about 'the media' as if they were in some other kind of business altogether. This was, of course, partly what they did mean. The incident fed distinctions between mainstream and tabloid press, which seek to carve out different niches in a highly competitive industry. The anguish and soul searching could also, cynically, be seen as a further strategy for an industry which has always insisted there is no need for regulation since media professionals and corporations are

by Dr Charmaine McEachern Anthropology Department

does the public need to know? These are ethical problems for media which coincide with their other obsession, profitability. If what is most lucrative is also unethical, can media negotiate this dilemma? No code of ethics has solved this one; codes never will.

# STAR QUALITY: DIANA'S LOVE/HATE RELATIONSHIP WITH MEDIA

The clearest thing in the manner of her death and the week's reporting between its announcement and her funeral, was Diana's celebrity status. It was celebrity which brought her and the paparazzi together in that tunnel, regardless of how the accident was caused.

If all star personas are both a construction based on particular qualities of persons and references to the ongoing star system itself, then the star who comes to mind when analysing Diana's star persona is Marilyn Monroe. This was made explicit when Elton John performed a rewritten version of "Candle in the Wind" at the funeral. The two abiding qualities of Diana's star image were vulnerability and compassion.

Vulnerability is there in the dominant narrative of Dianathe fairytale. Her star story as repeated during the week begins and ends with allusions to fairytale; from the wedding to Prince Charles to her relationship with Dodi Al Fayed, now seen as the post-divorce chance of a fairytale romance once more. There is a fascinating opposition here. The first is the fairytale of actual fairy stories, the young girl catching the eye of the Prince who will one day be king, to be incorporated into that greatest symbol of tradition and cultural continuity, the British monarchy. Yet the Dodi fairytale was that of celebrity itself, the perfect romance within the glamour world of celebrity, the world of fashion, money, media and consumption. Diana united these two worlds as a star persona; drawing first on the one as the mother of the future king of England and then on the other, the world of style, of being seen to be beautiful. This gave her an ambiguity, a space to be different.

I'll stop writing and get back to some hard thinking, as I sit here on Rodos, surrounded by ruins of the once-great classical civilisations.

## MARY O'KANE

P.S. Don't forget that the Vice-Chancellor of the Universiti Putra Malaysia, Professor Syed Jalaludin (yes, the tiger man!) is our guest speaker at the first of our October commemoration ceremonies. capable of self-regulation to control content and practice.

The public/private divide is central to both these ethical and regulatory concerns and the paparazzi. It is the private glimpse of the public figure which tantalises both media producers and consumers. Here, there is a sense that the real person is revealed with the unfolding of some unrehearsed, uncontrolled detail of private lives and relationships. To what extent are public figures fair game? Is there ever private space left for public figures? Just what

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	<b>Adelaidean</b>		The newspaper of The University of Adelaide	
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# Early enrolment to help S·I·T students settle in Adelaide

Some 220 Malaysian students preparing to complete their degrees at the University of Adelaide will take part in a special enrolment event this month at the University's educational "twin" in Malaysia, the Sepang Institute of Technology (S-I-T).

Senior Adelaide academic staff plus members of the International Programs unit will visit S·I·T on 20 October to formally enrol the students in the University, provide course advice, and offer information about living in Adelaide.

The innovative twinning program allows students to complete University of Adelaide Bachelor degrees in Economics, Commerce, Finance, Mathematical and Computer Sciences, Science and Engineering. The first two years of study are undertaken at S·I·T before the students transfer to Adelaide for the final years of their degree.

While at S·I·T, students study the same curriculum as their counterparts in the early years of their courses in Adelaide, and take the same examinations.

In the 1996 final examinations, the S·I·T-based students achieved a high percentage of High Distinctions and Distinctions, and an outstanding pass rate overall. The Academic Director for the twinning program, Dr Tom Kurucsev, said the students were clearly destined to achieve outstanding results in the final years of the course.

He said six students coming to Adelaide next year would receive tuition scholarships in recognition of their academic achievements.

"We look forward to welcoming all the students in Adelaide in 1998 and will be doing everything we can to ensure that they obtain maximum value from the time they spend in our University," Dr Kurucsev said.

—Patricia Cree



## **REVIVING ANCIENT LIVES**

Ancient people and the diseases they suffered will again be 'resurrected' at a public lecture at the University of Adelaide on Saturday, 18 October.

By popular demand, Professor Maciej Henneberg and his wife Renata Henneberg (Department of Anatomomical Sciences) will repeat their public lectures "Pompeii: Life Stopped by a Volcano" and "Life, Death & Diseases in Times of Pythagoras".

The combined one-off lecture will look at such fascinating topics as reconstructing people's skeletons and faces from 2000-year-old remains, the volcanic disaster at Pompeii, and the lifestyle, employment and health of people in ancient societies.

This exciting and informative public lecture will be held at 3.00pm in the Florey Lecture Theatre, first floor of the Medical School on Frome Rd. Admission is \$5 per person. For more information phone (08) 8303 5998.

## **MAKING FACES**

An internationally renowned expert in reconstructing human faces from forensic and archaeological evidence will give a free public lecture at the University of Adelaide on 10 October.

Richard Neave, a medical artist from the University of Manchester, has played a pioneering role in reconstructing the faces of modern murder and accident victims, as well as ancient figures, both well-known and obscure.

He is the co-author of a new book, *Making Faces*, which recounts the fascinating scientific detective work of facial reconstruction. His forensic work has on many occasions assisted police forces throughout the UK to give names to previously unidentifiable bodies.

The lecture, also supported by the South Australian Museum, will be held in the Florey Lecture Theatre at the Medical School on Frome Road at 6.30pm on Friday, 10 October.

## **TRANSGENIC ANIMAL WORK**

Dr Simon Bawden, Dr Gabriel Sanchez-Partida and Professor George Rogers all of the Department of Animal Science and the CRC for Premium Quality Wool—and Dr Mark Nottle from BresaGen presented papers on Adelaide research on transgenic animals at a recent international meeting, "Transgenic Animals in Agriculture" held at Lake Tahoe, California.

The meeting surveyed progress in transgenic technologies for improved animal production and covered transgenic cattle, pigs, sheep, poultry and fish. One of the major speakers was Dr Ian Wilmut, who leads the team at the Roslin Institute, Edinburgh that produced the cloned sheep Dolly.

# New viewpoints from student conference

About 1300 high school students from 63 schools across South Australia recently took part in a Year 12 English Studies Conference at the University of Adelaide in a bid to brush up on their English skills.

The conference was held on 23 & 24 September, leading up to Year 12 English exams next month. Short lectures on a range of topics from the Year 12 syllabus were held over the two-day event, with this lecture on poetry (pictured right) drawing a big crowd to Bonython Hall.

"An important aspect of the conference is that students are able to hear some new ideas and viewpoints which might help them as they revise for their final English exams," said Dr Sue Hosking, head of the University's English Department and convener of the conference.

"High school students have the opportunity to meet University lecturers, look around the campus, and discover what it might be like to study English at University; at the same time their teachers are able to interact closely with University staff."

Dr Hosking said this was the first time the Year 12 English Studies Conference had been run at the University of Adelaide, following many successful conferences in previous years at Flinders University. The event was now being shared between the universities, with academics from both institutions taking part.

"The value of this conference is immeasurable, not only because it helps to secure a good intake of first-year students into our English courses, but also as an expression of goodwill between the universities and South Australian high schools," she said.

"Following the success of this year's conference we're already considering a new outreach program for country schools, as well as another conference for teachers at the start of next year. In this way we could help teachers to explore texts they haven't taught before and introduce them to new ideas and recent developments in English Studies. This could translate into a wider depth and variety of teaching and learning for Year 12 English students throughout South Australia."



# **Prague visitors consolidate Czech links**

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Growing ties between the University of Adelaide and Charles University in Prague will be consolidated with the arrival next week of the leading Czech scholar Dr Martin Procházka to spend several weeks as a Distinguished Visiting Scholar based in the Department of English.

With Dr Procházka—who is Deputy Head of the Department of English and American Studies at Charles University—will be PhD candidate Karel Janícek, who is coming to Adelaide to work in Australian Studies, under a grant made by DEETYA. He expects to be in Adelaide for about eighteen months.

The DEETYA award was in response to a joint application from the

Department of English and American Studies in Prague and the Centre for Australian Studies in Adelaide to support the teaching of Australian Studies at Charles University.

Australian volunteers have operated a course there since 1993 but there have been some problems of continuity. It is hoped the DEETYA grant will allow a Czech national to become expert in Australian Studies, and maintain the course in Prague on a permanent basis.

"A strong centre in Prague could foster the development of Australian Studies in the Czech Republic and Central Europe generally," said Mr Tim Mares, a former member of staff in the English Department who inau-

gurated the Prague course in 1993 and taught there again last year.

Mr Mares said that while Dr Procházka was to be accommodated in the English Department, he would be happy to meet and talk with anyone in any discipline wishing to make contact with Czech scholars in their field.

Dr Procházka will present a seminar in the English Department at 12.30pm on 17 October with the title, "Puppets, Players and the Ghost: Mimesis and Simulacrum in Kleist, Shakespeare and Commercial Culture". He has also agreed to give a talk for the Centre for Intercultural Studies and Multicultural Education in November. Transgenic livestock are being used to produce a variety of pharmaceuticals, some of which are in late stage clinical trials. Dr Nottle gave an invited paper on Bresagen's work with Growth Hormone Transgenic Pigs which show early promise of improved growth performance, and members of the Animal Science Group presented their research on transgenic sheep and wool production.

"It is worth recording that Adelaide research is keeping up with world-wide developments although it remains highly-dependent on long-term funding which is increasingly difficult to acquire," Professor Rogers said.

# Waite the key to future for olive oil industry

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"It's fascinating to watch chefs tasting olive oils as they predict which foods will benefit from individual oils—'green' for fish, 'peppery' for kangaroo, and so on," Professor Sedgley says.

Interest in olive oil tasting is being fuelled by the visit to Australia this month of Dr Luciano Di Giovacchino of the International Olive Oil Council, who is regarded as the world's foremost authority on olive oil.

In association with the Tasting Australia activities, he will preside at a judging of local oils. An Australian Olive Oil Exhibition will also be conducted by Olives South Australia.

Could South Australian olive oils win the respect accorded nationally and internationally to the State's wines?

"We are clearly Australian leaders, and, while olive-producing countries such as Spain and Italy have had olive breeding programs for many years, our approach is certainly one of the most comprehensive.

"We are linked in to the international programs, we have a lot of very skilled and committed people in the industry, and we have natural advantages in that the olive trees have adapted so well in our climate.

"As well, the olive oil industry is growing by 15% each year. The time is right for boutique oils," Professor Sedgley said.

Currently, research is funded by the olive industry, the HRDC and the RIRDC. One postgraduate, one honours and one research project student are currently working on the program.

Further research funding is being sought from the Australian Research Council.

—Patricia Cree



ee Professor Margaret Sedgley—"the time is right for boutique oils". Photo: David Ellis.

# Feast for the senses at Uni Open Day

There's a great opportunity to try your senses at olive oil tasting at the University of Adelaide Open Day at the Roseworthy Campus on Sunday, 19 October (10am-4pm).

Olive research and olive oil tastings will be centrepieces of the Department of Horticulture, Viticulture and Oenology's Open Day displays.

Also from the Division of Agricultural and Natural Resource Sciences, research into biological control of weeds will be featured on Open Day. Moths which combat serious agricultural pests such as boneseed and horehound, and potential means of controlling the well-known weed Salvation Jane, will be on display.

Walking tours of farm operations and bus tours to see deer, pigs, poultry and crops will be available.

The Division of Humanities and Social Sciences will be represented

by its new Centre for the History of Food and Drink. Visitors will also be able to use a 3D computer simulation to 'fly' through Adelaide, and see how bushfires may be predicted and controlled in the future using geographical information systems.

Engineering and Mathematical Sciences will demonstrate the horror of earthquakes with a working earthquake model, plus an opportunity to find out about zero gravity and how it works.

Architecture students will have their models of innovative buildings on display, and they'll be looking for volunteers to help model a building during the day.

There's more to real forensic science than you'll ever see on television! The work of the Faculty of Dentistry's respected forensic odontology unit will be on display, plus fascinating displays of human anatomy from the Faculty of Medicine. Associate Professor Mike Tyler and his groundbreaking research involving frogs will also be featured.

All Divisions will offer course and career information and talks throughout the day.

Open Day at the Roseworthy Campus offers an ideal opportunity to combine an update on all the University of Adelaide's courses and the careers to which they lead with a day of fun and learning for the whole family.

-Patricia Cree

The Roseworthy Campus is ten kilometres northwest of Gawler. Take the Main North Road and Gawler bypass, then follow the signs.

Public Transport: Take the train to Gawler Station. A free bus will operate between Gawler Station and the Roseworthy Campus from 9.45am- 4.45pm.

# October graduations

The Chancellor, Mr Bill Scammell, will preside for the last time at a University of Adelaide Graduation Ceremony when he takes the stage in Bonython hall on Monday 13 October.

Mr Scammell will retire as Chancellor following the November meeting of University Council.

Because of the large number of graduands, the University is holding two ceremonies on 13 October.

The morning ceremony—for Agricultural and Natural Resource Sciences, Dentistry, Engineering, Mathematical and Computer Sciences, Medicine and Science—will be addressed by the Vice-Chancellor of Universiti Putra Malaysia, Professor Dato' Dr Syed Jalaludin Bin Syed Salim.

In the afternoon, the University's newly appointed Deputy Vice-Chancellor (Research), Professor Ross Milbourne, will address graduands in Architecture and Urban Design, Arts, Economics and Commerce, Law and Performing Arts.

# Adelaide toxic sludge research accentuates the positive

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Dr Grant said the sludge could also be used to attack toxic blue-green algae in South Australia's waterways.

"A major cause of blue-green algae is

ing. They apply it in the Peel Estuary, which has enormous problems with algal blooms because of the agricultural land surrounding it and its high levels of phosphorous. By applying 'red mud' to the soils

# Study aims to improve the quality of nursing

## From Page 1

"The use of 'recency' to determine professional competence might not be sufficiently rigorous to withstand litigation, nor is it a in the workplace, and make recommendations to nursing regulatory authorities about how to improve the current system. The study will be completed in 1998.

phosphorous in the water. When phosphorous comes into water supplies either through sewerage effluent, dairy effluent, or fertilisers from agricultural land, the algal growth and plant growth just takes off, causing algal blooms. If we can keep phosphorous levels low in waterways, we can reduce the occurrence of these algal blooms," Dr Grant said.

"Because sludges from filtered water are high in organic matter, aluminium and iron oxides and hydroxides, they have an enormous affinity for phosphorous. They literally 'suck up' the phosphorous and stop it from causing algal growth.

"This principle is reasonably well understood in Western Australia, where they use what's known as 'red mud', the bauxite residue from aluminium processto stop the phosphorous dead."

Dr Grant said he and many other researchers at the University of Adelaide believed the current regulations surrounding the disposal of alum sludge were too restrictive.

"Disposing of this valuable resource in landfill sites is unjustified when there are so many possibilities for its practical use and so few disadvantages," he said.

"We need to further explore ways in which we can better understand the potential benefits and applications of this sludge, rather than simply dumping it at great cost to the taxpayer and leaving its beneficial properties untapped." clear indicator of safe nursing care," he said.

"The idea of this study is to identify a number of factors which enable us to decide that, yes, this particular nurse has remained or is remaining competent in their job. Issues such as continuing education for nurses, ongoing evaluation and the lack of national consistency in this area will all be looked at by the study."

Through consultation with nurses across Australia, the research project will identify and develop a statement of clear indicators of nursing competence, provide a description of how these indicators could be applied Nurses are urged to participate in the study, either by sending written submissions to the Australian Nursing Council or by attending Open Forums to be held in every capital city in Australia.

The Adelaide forum will be held at 5.00pm on Monday, 13 October in the Stirling Lecture Theatre, Ground Floor, University of Adelaide's Medical School South (off Frome Road).

The deadline for sending written submissions is Saturday, 25 October. For more information phone the Australian Nursing Council on (08) 8226 6504.

—David Ellis

—David Ellis

# PhD a milestone for anaesthesia specialist

Guy Ludbrook is a doctor twice over.

Having graduated with a degree in Medicine at the University of Adelaide in 1985, then completing his specialist training in anaesthesia in 1994, Dr Ludbrook has now gone on to achieve the biggest milestone possible in his academic career—a PhD.

On Monday, 13 October he will be one of 386 people receiving their awards at the annual October commemoration ceremony at the University. This year, because of the large numbers of graduates, two ceremonies will be held in Bonython Hall on the same day. Another 304 people will receive their awards *in absentia*.

Dr Ludbrook is a lecturer in the University of Adelaide's Department of Anaesthesia & Intensive Care and is a practising anaesthetist at the Royal Adelaide Hospital (RAH).

His PhD thesis, researched under the supervision of Professor Bill Runciman and Dr Richard Upton, could have major implications for the administration of anaesthetic drugs to patients world wide.

"We give a lot of intravenous drugs in Anaesthesia, and we know that there can be side-effects associated with their use. Although we've been administering anaesthetic drugs for the last 50 years or so, one of the problems has always been that, in some circumstances, we've never really understood the best ways of giving



Dr Guy Ludbrook—work has major implications for patient safety. Photo: David Ellis

them," Dr Ludbrook said.

siding Judge of the Los Angeles Municipal Court and has worked in

criminal, civil, juvenile and family

law. He designed a program for

mandatory settlement conferences

and arbitration in civil cases in the

CISME will host a presentation by

Japanese artist Ms Suma

Tsuchiyai, originator of 'Brilliant

Pictured right at the seminar are

(from left) Mr Eugene Biganovsky,

Ombudsman for South Australia,

Professor Jerzy Smolicz, director of

CISME, Judge Dorothy Nelson and

Judge James Nelson. [Photo: David

Image Art', in the Council Room.

On Wednesday 22 October

"So we've used a series of experiments to actually measure the drugs as they move around the body, in a way which no one else in the world has done. We can accurately measure the concentrations of these drugs, how quickly they get to the brain, and we can see what factors influence the drugs' movement and effectiveness. "We're at the point now where we have a really good understanding of many of the drugs that are used in anaesthesia, and for the first time we can provide a good guide of how to get the best value for money and to provide the safest possible delivery of these drugs to patients."

Dr Ludbrook's PhD work was focused on a drug known as propofol,

which over the last 15 years has become one of the most commonly used intravenous drugs in anaesthesia. His findings show that significant improvements can be made on the current manufacturer's recommendations for use.

Two papers written by Dr Ludbrook and Dr Upton (an extension of the PhD work) will also appear in an upcoming issue of the *British Journal* of Anaesthesia. These papers provide a guide for administering propofol in a bid to improve patient safety and the effectiveness and efficiency of anaesthetic drug use.

Dr Ludbrook, who spends much of his time teaching students at all levels as well as practising as an anaesthetic specialist, said completing the PhD was hard work, but it had also given him a great sense of achievement.

"Being able to combine university research, teaching and clinical work, as well as study, has been a very important experience, and our department is really well set up to allow you to do that.

"I suppose I see the PhD as a milestone in my academic career. I have an enormous sense of satisfaction and achievement having completed that body of work over a period of time, and there's also a sense of satisfaction because the work does have clinically relevant outcomes and implications," he said.

-David Ellis

# US judges in CISME session on alternative conflict management

Two visiting US judges were the guests at a recent seminar at the University of Adelaide hosted by CISME, the Centre for Intercultural Studies & Multicultural Education.

Judge Dorothy Nelson and her husband, Judge James Nelson, presented a talk on alternative forms of conflict management on Tuesday, 23 September.

Dorothy Nelson is a Senior Circuit Judge with the US Court of Appeals and former Professor of Law at the University of Southern California. She has published widely on a range of topics including dispute resolution.

James Nelson is a former Pre-

re- Ellis] Advertisement

US

A P ROWE ROOM

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## Going to a conference this year?

If you will be attending a national or international conference this year, then consider volunteering to host it in Adelaide.

The Adelaide Convention and Tourism Authority (ACTA) is working with the University of Adelaide to bring more conferences to Adelaide. We are here to help you and provide complimentary support from the earliest bidding process to the final realisation of the conference.

We provide an impartial 'one stop shop' and can help you with all of your conference needs.

So if you will be attending a conference in 1997, why not take a package of information on Adelaide, including a complimentary promotional video.

For details of support provided, and to obtain your Adelaide package, contact Ms Anne-Marie Quinn on 8212 4794 or the Vice-Chancellor's Office on ext 33011. Email: <aquinn@registry.adelaide. edu.au>



# **Interview: David Morton on animal experiments**

The issue of scientific experiments on animals was looked at from a fresh perspective last month when visiting UK Professor David Morton gave a guest lecture at the University of Adelaide, at the invitation of ANZCCART (Australian & New Zealand Council for the Care of Animals in Research and Teaching) and the Faculty of Science.

David Ellis spoke with David Morton, who is Professor of Biomedical Science & Ethics at the University of Birmingham, about the prevention and alleviation of pain and fear in animals.

"Animal experiments are sometimes termed a 'necessary evil'—we have to do them if we want to save human lives and if we want to advance the human condition," Professor Morton said.

"It's also expressed as a 'tragic choice'—if you do experiments on animals you can cause suffering, but if you don't do this research then you may not devise drugs that could be used to relieve human suffering.

"Because animals must be used in research, since in many cases cell cultures and computer modelling still aren't good enough alternatives, I think we should try to reduce the numbers of animals we use in experiments. Whenever we use animals in scientific experiments we should first of all make sure that it really is necessary. If it is necessary, we should try to reduce the amount of pain they suffer and try to enhance their wellbeing."

## What are some of the ways in which this could be done?

"Scientists, laboratory technicians and lab vets can actually increase animal wellbeing by giving them an enriched environment-letting them have social mates (keeping them with other animals as opposed to keeping them alone in cages), giving them bits of wood to gnaw or letting them build nests instead of keeping them in a barren cage, it all helps. Even if you can give these animals a variety of diet, then I think you can make life better for the animal overall.

"The idea is to try to recognise when animals are suffering, and then to try to avoid that suffering or to minimise it in some way. That concept is called 'refinement'. What we're working on at Birmingham is developing 'score sheets' which allow scientists, technicians or vets to recognise when animals are suffering. We have a series of clinical signs, and they're marked off on the sheets as to whether or not they're present or absent in the animal. On the basis of that you can see on how many counts an animal is deviating from normality and also how far it's deviated. It gives you an idea of how much an animal may be suffering, and then you can do something about it.

"There are some experiments, for example, involving fairly nasty infectious diseases which lead to death. If we can say as soon as an animal starts to show convulsions, then rather than wait for the animal to continue suffering and die two or three days later, let's kill it. Because we already know it's going to die. It's a very simple concept. using humane 'endpoints' as they're called. That's just one of many approaches we're taking.'

# What's the feeling among scientists to some of these ideas?

"People are now more aware that animals feel pain, partly because of the activities of the animal welfare and animal rights movements. There's also increased evidence to suggest that animals can probably experience feelings like pain, discomfort, anxiety, depression, grief, happiness, just like we can. Scientists are becoming sensitised to these issues, particu-



David Morton. Photo: David Ellis

larly the younger scientists. They realise we may be getting human benefit out of this, but they also want to cause as little suffering to the animals as possible.

"I think scientists have a moral responsibility to do more research into refinement and to see that as part of their overall scientific objective. They also have a moral responsibility to report on experiments that have failed. There are a lot of experiments that have probably been conducted on animals which never get reported because they didn't show any positive results. By not reporting it, other people are perhaps going to carry out that same experiment in ignorance. So I think scientists should be detailing all the tricks of the trade that go into making an animal model work, including recognition of adverse effects on animals and what they've done about it.

"Some will argue that this gives us a rod to beat our own backs with, because the animal welfare groups will say: look what you're doing to animals! But I think scientists have just got to bite the bullet and be prepared to justify their work. They've got to say: look, we're publishing all the details to avoid duplication of research, and we're doing all we can to minimise animals' suffering."

## **GUEST COMMENTARY CONTINUED**

#### From Page 2

But one wonders what would have happened had the second fairytale turned into reality, because the Al Fayeds are highly problematic in Britain. While Dodi had produced *Chariots of Fire*, that hymn to British nationalism, his father, owner of Harrods, has been refused British citizenship and implicated in political scandal. One can't help wondering if the extraordinary Orientalising media coverage of Jemima Goldsmith's marriage to Imran Khan would not also have been visited on Diana. It would not have been the first time the media sought to demolish her. Theirs was a love/hate relationship on both sides.

The media narrative which joins these two moments of fairytale is the nightmare, the fairytale gone wrong; the estrangement between Diana and Charles, the food disorders, suicide attempts, apparent instabilities, all now feed the myth of Diana as one of us, the People's Princess, a woman who knew what ordinary Britons were like because she suffered as they have done. The publicness of her nightmare was central here, though it was also aided by the acts of real compassion and the working for good causes among the outcasts and forgotten in society which became so central to her star persona after her death. What both the fall and the public (and private) acts of compassion did is to construct a star persona for whom emotion was central. That she was a person of enormous compassion, humanity, deep feeling, a love of life and a desperate need to love, both as a parent and as a friend, is absolutely central to this woman's star persona. It is the crux of her attraction as celebrity as it relied upon the realness and ordinariness of the extraordinary, public person. And here we come to the final theme of the week's stories; Diana and the Royals or more accurately, Diana's death and the crisis of Royalty in Britain.

### **ROYALTY AND CELEBRITY POLITICS**

There was no hint at the beginning that events would quickly produce crisis for the Royal family or the institution of Royalty. Though television screens were filled with images of people arriving at Kensington and Buckingham palace with flowers and their own personal grief, the Palace stuck to its usual, formal announcements and reticence to enter into the clamour. But quickly a paradox arose. Though it was public demands for seeing Diana which were deemed in some quarters to have contributed to her death, the privacy of the family, especially the invisibility of Diana's sons, was seen as problematic. Carefully staged media appearances outside Balmoral were not enough and the media entered into the public criticism of the Family's aloofness and the major debates around what the funeral should be.

modern period is the way in which it has become media politics-celebrity politics. And this is the clue to the week's contestation over the behaviour of the Royals and the usefulness of the monarchy itself. Noteworthy was the public disapproval of the Royal family's lack of emotion, comments like "it's a shame that it had to be the best of them that went first", which were reported in various forms over and over, along with editorials and commentaries which argued that Diana had given popularity to the monarchy, ironically often by refusing the very lack of emotion, the iron will and discipline which now prevented public mourning by the Royals.

The dramatic focus of all this became her sons, particularly Prince William. Ultimately it was Diana as the mother. especially the mother of the future King, which prevailed. And it was the judgement of the week that it was her style of mothering, a people's style which does not eschew emotion, fun and visible love, which was most likely to produce Harry and William as good men, good leaders. Hence the massive media outpourings after Earl Spencer's vow to ensure the continuance of her style. The people who told the cameras so emotionally that he spoke for them were first asserting a relationship with Diana and laying claim to William and Harry as Diana's heirs.

of ordinary life in Britain. As such, through their imagined relationship with Diana, the mourners were also affirming themselves.

This whole ensemble also suggests that people today *only* understand a media politics, that anything not able to be played out publicly in front of the media in terms which relate to people's own perceptions of the world, is perhaps not quite real, not real enough anyway. And here, rather than a deep republicanism being uncovered, we have Diana being set up as the model for the monarchy of this democratic society. It is nothing less than a populist monarchy, as she was seen as a populist princess, on the side of the people against the many named and nameless "thems".

It is no accident that it is the media within which such a message is shaped. Not only do the media provide the political forum which shapes politics so fundamentally today, but populism is the preferred style of such a media politics. Here political figures are turned into celebrities by media which then make them accountable by taking on a role of representing the people against the immoralities and inadequacies of the privileged and powerful. Diana was just such a celebrity figure, shaped by and through the media to be a model for the powerful and privileged as they interact with the people, again via the television and the press. In the media narrative of her death it is the amateurism of the monarchy that has been challenged and found wanting in the era of public relations and the professional construction of image and style.

So, the final narrative for the week became a narrative about Royalty itself. It was a mega-narrative, uniting all the others. It brought together narratives about media, celebrity, motherhood, and modern royalty, or more to the point, Royalty in this postmodern period.

However much the Royal family tries to obscure it, Royalty is a political institution which marks British democratic politics in very particular ways. What is most notable about politics in this postBut the style of parenting which Earl Spencer was demanding in her name was also an affirmation of the value of ordinariness, something made clear in the week's insistence that one of the many unconventional elements introduced by Diana was her determination to bring up the boys knowing something

Dr Charmaine McEachern Anthropology Department



#### John Bray Law Chapter Dinner

The John Bray Law Chapter invites members and friends to a dinner at the Rococo Café, 46 Exchange Place (off Pirie Street), Adelaide, on Friday 31 October at 7:30pm.

The after-dinner speaker will be Ms Toni Harmer, who was granted the 1995 Law Foundation Fellowship to study International Protection of Geographic Indications and International Intellectual Property Law with particular reference to wine appelations.

All alumni, particularly members of the John Bray Law Chapter and the Agricultural and Natural Resource Sciences Chapter, are invited to attend. Please call the Alumni Office, 8303 4275, to make your booking. \$25 per person for a two course meal, coffee and petit fours. Diners are invited to purchase their own drinks.

#### Mars, Meteorites and the Meaning of Life

The Science and Mathematical Sciences Chapter invites alumni to a special seminar to be held at the Adelaide Convention Centre at 7:30pm on Wednesday 12 November. Family groups are encouraged. Bookings at BASS: \$9 adults, \$6 children/secondary school students.

The seminar will feature Professor Paul Davies, Dr Victor Gostin and Dr Chris Mortensen.

The speakers will discuss recent discoveries about the planet Mars and their implications from the different viewpoints of physics, geology and philosophy.

### Alumni Visit to Ngapartji

Alumni joining us for a group visit to Ngapartji Cooperative Multimedia Centre are reminded to meet at 5:45pm outside 211 Rundle Street, Adelaide, on Tuesday 14 October. It is now confirmed that the fee for this activity will be \$7 per person, payable to the Alumni Activities Coordinator at the door.

### **Elder Hostel visit to SA**

St Mark's College is hosting a visit of retired American professionals travelling on an educational tour of Australia for four weeks when they visit Adelaide from 31 October to 3 November next.

Would you like to open your home to a small number of these visitors for a Sunday lunch? Past Elder Hostel groups have nominated 'home stay' visits as the highlight of their Adelaide

# **Golden Jubilee** approaches

Graduates of 1947 will soon gather at the University to celebrate the Golden Jubilee of their graduation.

In the past twelve months the Alumni Office, helped by many graduates of the late 1940s and readers of the Adelaidean, has worked to locate the 368 graduates of 1947.

Graduates will be coming from interstate and overseas for this occasion as well as from the local area. There is a special reunion of medical graduates being held in parallel with the Golden Jubilee, and a similar gathering of engineering alumni from the late 1940s.

The class of 1947 was the first to graduate in the year following the completion of their studies. The student body was growing larger in response to the post-war economy's increased demand for a well-educated workforce.

Nancy Bates (Dip Social Science 47) recalls of her days as a student, "The University was still intimate and integrated. As zestful eager post-secondary students we matured rapidly under the influence of ex-servicemen and women returning to complete interrupted studies.

There were also those who seized the opportunity under the Commonwealth Reconstruction Training Scheme to enter new courses, like Social Work, with the purposeful direction of ensuring a better, fairer and more just society. We still had our ideals!"

Margaret McBride née Jones (BA 47) was among those who returned from war service to complete studies.

"As I hadn't completed my degree at the end of 1941, I had to postpone my final unit, a Science subject, till after the war," she said. "During the war I worked in the Army Inspection Unit and later, in Sydney, in the Rationing Commission. I passed my final unit in 1946."

Prominent environmental activist Dr Barbara Hardy née Begg (BSc 47) will be among those attending. She was a Founding Member of the Alumni Association and was its first Trustee for Science.



Dr Barbara Hardy-among those attending Jubilee celebrations. Photo: David Ellis.

Perhaps the alumnus who will travel farthest to attend the Jubilee will be Professor Don Bowes (BSc Hons 47): he is coming from Scotland, where he held the Chair of Geology in the University of Glasgow.

The Golden Jubilee Commemoration Ceremony will be held in Bonython Hall at 6:00pm on Thursday 16 October, and all alumni are welcome to attend. The Jubilee Address will be given by Dr Allan Kerr Grant (MBBS 47). The Ceremony will be followed by a Reunion Dinner in the Upper Refectory.

—Adrienne Eccles

# Four postgraduates to benefit from Mutual **Community and AUGU/RC Heddle awards**

The Alumni Association extends Mitchell (Department of Zoology). congratulations to the winners of the 1997 AUGU/RC Heddle Award and the inaugural Mutual Community Postgraduate Travel Grants.

The Mutual Community Postgraduate Travel Grants have been established with funds provided by alumni of the University through a program established between the Alumni Association and Mutual Community in 1996. Four postgraduate travel grants of \$2500 each will be available each year, two to be awarded in September and two in March

The inaugural Mutual Community grants were awarded to Mr Norbertus Wangsa-Wirawan (Department of Chemical Engineering) and Ms Nicola

Mr Wangsa-Wirawan's PhD study is in the area of novel protein separation. He will travel to the United States for advanced training in Atomic Force Microscopy.

Ms Mitchell's grant will support her travel to the Third World Congress of Herpetology in Prague, at which she gave a lecture about her research into the nesting ecology and physiology of Australian frogs.

The AUGU/RC Heddle Award, which was established by the former Graduates' Union, provides a travel grant of \$1250. Mutual Community has generously provided additional funds to augment the money available for this award this year.

The two doctoral students

have been selected for support are Mr David Foster (Department of Clinical and Experimental Pharmacology) and Mr Enoch Aduli (Department of Animal Science).

Mr Aduli is working on the genetic control of cattle breeds for fat content in the muscle tissue. His award will assist his travel to the Sixth World Congress on Genetics Applied to Livestock Production at Armidale, where he will present papers.

Mr Foster, who is researching drug metabolism and its implications for the treatment of dependency, will travel to the Twelfth International Symposium on Microsomes and Drug Oxidations in France.

#### experience.

We are seeking alumni who can invite some guests to their homes for an informal Sunday lunch on 2 November. They will have the afternoon free, so you can make your lunch as long or short as you wish. Naturally, you may invite other friends or family members to share the afternoon.

Please contact Mrs Julie Brown at St Mark's College, telephone 8334 5600.

## Information sought

David Kentish (BAgSc 1948) of Box 881 Millicent SA 5280, would appreciate contact with or information regarding Margaret Swallow. Please call (08) 8735 9069 after 10 October.

# Florey Chapter Medical Vignerons' Luncheon

The Florey Medical Chapter will again this year hold a Medical Vignerons' Luncheon at the Lirra Lirra Restaurant at the Waite Campus on Sunday 26 October.

Four medical winemakers will have their wines available for preluncheon wine tasting. Guests will then be able to select from these to enjoy with their luncheon.

The winemakers will be available

to discuss their products.

During the luncheon a very brief AGM of the Chapter will be conducted. This will include a report on the plans for the Florey Centenary Celebrations in 1998.

Urrbrae House will be open for inspection and the rose garden will be in full bloom.

The time of the luncheon is 12noon for 12.30pm. Tickets, at \$35

per person, are available at Alumni House, tel 8303 5800, fax 8303 5808. The Lirra Lirra Restaurant is in the Hannaford Building, entry through Gate 3, Waite Road, Urrbrae.

Further information may be obtained from David Game, tel 8362 1933, or Allen Gale, tel 8340 1566 or 8370 9081 (ah).

# Student team reports on recycling



Five students from Henley High School have spent a week at the University of Adelaide coming up with ways of improving the University's methods of recycling waste materials.

The Henley High group was the sixth Australian Quality Council 'E (Enterprise) Team' to be hosted by the University of Adelaide over the last two years.

Using Total Quality Management tools, the E Team worked with Cleaning Superintendent Joan Zilm and her team to review the University's recycling processes and make recommendations for improvement. They found that the recently introduced system of recycling first grade waste (white/pastel paper), using deskside and wheelie bins, was working well, and that there was now an opportunity to use a similar system for the recycling of second grade waste (cardboard, newspapers etc.).

Pictured after presenting their report and recommendations to representatives of the Property Services Branch are (from left) team members Joy Cherian, Scott Dawkins, Steven Todd, Kylie Faithfull and Samara Bowmer, with Henley High student counsellor Eva Porter. [Photo: David Ellis]

# 5MBS program tribute to benefactor

Emeritus Professor Ren Potts will interview the most recent beneficiary of a generous bequest by his aunt, Doris West, in his program "Featuring..." on Radio 5MBS on Sunday 12 October at noon.

She is Louise Nowland, who is now doing a Master's degree in Clarinet under the supervision of David Shephard in the Elder Conservatorium.

Professor Potts will also feature recordings of some of Ms Nowland's Elder Hall concerts. She can be heard playing Stravinsky's "Three Pieces for Solo Clarinet", and in concert in Mozart's "Clarinet Concerto", Brahms' "Trio op 114" and Arthur Benjamin's "Le Tombeau de Ravel".

The Doris West bequest (around \$750,000) supports coursework and research postgraduate scholarships for women as well as piano music and the piano acquisition fund in the Conservatorium.

# **Reusable products prove a money-saver for Union**

New recyclable plastic cups are to start appearing in some of the University of Adelaide's cafeterias yet another example of the growing environmental consciousness on campus.

The University Union has for some years now been using plates and bowls made out of recyclable plastic in areas such as the Backstage Cafe, the refectories, and conference rooms.

The tableware, manufactured by local Adelaide company Romax, is

made from top-quality polystyrene beads which are stronger than singleuse plastic products and have the appearance of quality plates, bowls and glasses. The Romax tableware is sold on a "closed loop" basis—it can be washed and reused dozens of times before being collected by the company and recycled.

Food Service Manager with the University Union's Food Catering Department, Mrs Jan Hunter said the Romax products were a good alternative to other forms of tableware and drinkware.

"The Union has been conscious for some time now of the need to use recyclable tableware," she said. "We've tried many different products, but the Romax products are by far the best in terms of their reusability and their appearance. They're cheaper than crockery or glass, and they're also less likely to be broken or stolen."

Mrs Hunter said the new recyclable plastic cups would be used on a trial basis in the Mayo Refectory from early this month. "People don't like the cheap-looking polystyrene cups, so we believe this will be a good alternative. It also means that in the long-term the Union could save money by using a product that is reusable, rather than having to replace them all the time. From our point of view, it's good to support a South Australian company, and it's also good to use something that's recyclable. We believe that's what our patrons want, and we're happy to accommodate them."

—David Ellis

### ACCOMMODATION

**AVAILABLE:** Fully furn, small, self contained granny flat with sep entrance. No running costs to be paid. Close to transport direct to city. Ideal for very quiet student, non-smoker. \$45 pw. Ph 8382 9545.

**GLEN OSMOND:** Fully furn, 3 br house. Walking distance to Waite and good schools, near bus routes to city, hills and circle line. No pets. Lawn mowing done. Avail 10 Oct. \$200 pw + bond. Ph 8379 4869.

HALLETT COVE BEACH: Share accomm - Ige bedsitter, fully furn, self contained, close to beach and train station. \$75 pw. Ph 8387 4054.

HAZELWOOD PK: 2 br,

would be ideal. Ph 8339 3392.

HOUSE SITTING: English lady offering free house, pet, garden care. Short or long term from end Oct 97 - Feb 98. Ph Jenny Nairn 8204 6257.

**MODBURY:** Non smoker wanted to share 3 br house situated in quiet area, walking distance of transport & shops. \$75 pw + exp. Refs required. Ph 8265 3854.

NORTH ADELAIDE: 2 storey, unfurn, stand-alone terrace with balcony. 3 br, b-in robes, ducted air cond, enc c/yard, dble garage, security system. Avail early Nov 97. Bond & refs required. Ph Chris 8302 0481 or 8267 6076 (ah) or email: <Francis. Tan@ Unisa.Edu.au>



ment/house for scientist from early Jan 98. Periods as short as 1 mth while you're on leave. Refs avail. Ph 8259 5895 or email: < Jim.winkles@dsto. defence.gov.au>

WANTED: Visiting academic working at CSIRO, North Terrace (wife & 3 children) require furn accomm from mid-Jan 98 to end Apr 98. To \$400 pw. Ph Elizabeth 8303 8814 or email: <elizabh@dhn.csiro.au>

### FOR SALE

**FRIDGE:** 240 ltr Compact Westinghouse Silhouette II,

UNIT: West Beach - 18/23 Military Rd. 1 br, newly renovated, views over city, walk to beach, minutes to uni. \$38,000. Ph Peter Jackson 0419 810 681.

#### DEPARTMENTAL

**TENDER: COMPUTING:** 1 Power Macintosh 6100, 3 yrs old. 2 NEC pinwriter P6300 printers, 7 yrs old. 1 Genius Scanner II. Enquiries 8303 7272. Tenders to Purchasing Manager, Waite Campus by Friday 10 October 97.

TENDER: FORD COURI-ER: XL, 4 x 2 pick-up ute, 1994, VPU 378, 35,000 km, manual, white, mudflaps, tow pack. Inspection Tuesday 14 October, 12-1pm, ph Rex Connolly, 8303 7208. Tenders in a sealed envelope marked Tender No W243 to the Purchasing Manager, Waite Campus by Monday 20 October 1997. **TENDER: FORD COURI-**ER: XL, 4WD dual cab, 1994, manual, VPL 204, 90,400km, white, air cond, mudflaps, tow pack, bull bar, tray top, running boards. Inspection Tuesday 14 October, 12-1pm, ph Rex Connolly, 8303 7208.

Tenders in a sealed envelope marked Tender No W242 to the Purchasing Manager, Waite Campus by Monday 20 October 1997.

**TENDER: HOLDEN COM-MODORE:** VS wagon, 1996, 39,000km, white, VTZ 972, auto, air cond, mudflaps, tow pack, cargo barrier, roof racks. Inspection Tuesday 14 October, 2-3pm, ph Piers Brissenden, 8303 3999. Tenders in a sealed envelope marked Tender No W248 to the Purchasing Manager, Waite Campus by Friday 17 October 1997.

**TENDER: HOLDEN COM-**MODORE: VS wagon, 1996, white, 39,000km, VTZ 945, auto, air cond, mudflaps, tow pack, cargo barrier, roof racks. Inspection Tuesday 14 October, 2-3pm, ph Piers Brissenden, 8303 3999. Tenders in a sealed envelope marked Tender No W247 to the Purchasing Manager, Waite by Friday 17 October 1997. TENDER: MUSEUM CABI-NETS: 6 x 3 door, 3 have display cases, all need some glass replaced, each has 18 wooden draws, ex Tate Museum (believed to be Circ 1930's). Will sell separately. Inspection ph Gerald 8303 5844. Tenders in a sealed envelope marked Geology Tender to Manager, Dept of Geology

& Geophysics by Friday 17 October 1997.

**TENDER: TOYOTA COROLLA:** Seca hatch, 1994, VPO 910, white, 35,068km, auto, air cond, floor mats, mudflaps. Inspection Tuesday 14 October, 12-1pm, ph Rex Connolly, 8303 7208. Tenders in a sealed envelope marked Tender No W244 to the Purchasing Manager, Waite Campus by Monday 20 October 1997.

**TENDER: TOYOTA LAND CRUISER:** 80 series, F25-80R, 1994, white, VPO 912, 32,620km, manual, air cond, floor mats, mudflaps, tow pack Inspection Tuesday 14 October, 12-1pm, ph Rex Connolly, 8303 7208. Tenders in a sealed envelope marked

fully furn & equipped house (& linen). On bus route to city. Lge garden, sleepout, near Burnside & Linden Pk schools. \$220 pw. Ph Mary Ann 8379 2715.

HAZELWOOD PK: Self contained, studio-type granny flat, plus study. Fully furn & equipped including linen. Garden outlook, own entrance, near bus stop, quiet surroundings. Non-smoker. \$120 pw includes electricity. Ph Mary Ann 8379 2715. HOUSE SHARE SOUGHT: Music Lecturer seeks house share from mid-Nov 97. A house with a piano **OFFICE:** At 175 St Vincent St, Port Adelaide. 36 sqm, in former art deco style post office building (b. 1937). Ph 8447 8809.

**SECOND VALLEY:** Fully furn (opt) house, 4 br (1 with ensuite), open-plan lounge/kitchen/dine. Superb views, 5 mins to beach. Ph 8327 0761.

WANTED: Rent or swap - 3 or 4 br house close to Royal Brighton Sailing Club from 20 Dec 97 - 5 Jan 98. Swap 3 br terrace house in Watsons Bay, Sydney. Ph (02) 9337 6186.

WANTED: Furn apart-

\$175. Ph 8303 3403 or 8267 1779 (ah) or email <b\_uragun@eleceng.adelaide.edu.au>

MAZDA: 626, 1982, blue, 5 spd, exc cond. VJK 540. \$2,850 ono. Ph 8297 1848 (after 8pm).

NISSAN MICRA: LX manual, silver, immaculate cond, factory warranty, very low kms. VTZ 735. \$12,000 ono. Ph Esther 8293 1158 or 8201 3852.

**TOYOTA:** Sedan, 1975, auto, white, tow bar, very clean, no rust, good engine, new brakes & tyres. SLF 782. \$1,150 ono. Ph 8297 1848 (after 8pm). Tender No W245 to the Purchasing Manager, Waite by Mon 20 October 1997.

### MISCELLANEOUS

**CLEANING:** From \$30 have your house cleaned for up to 1.5 hrs. Receive a free written quote tailored to your needs. North Adelaide & eastern suburbs only. Ph 8363 2663.

**LOST:** Silver brooch with an engraved image of a Canadian thunderbird. Lost on North Tce Campus on Tues 9 Sept. Reward offered. Ph Ursula 8303 4745.