

# Bulletin

## ALTERNATIVE ENERGY FOR THE HUNTER

With an ever increasing demand being placed on the world's energy resources, the necessity to develop alternative sources of power is of paramount importance. Researchers at The University of Newcastle, aware of the effect that energy consumption is having on the global environment, have designed a unique wind turbine system aimed at providing environmentally benign power supply in remote areas.

Dr David Wood and Dr Phil Clausens, from the Department of Chemical Engineering, in collaboration with Shortland Electricity and the Centre for Industrial Control Systems (CICS), are developing a wind turbine which will generate up to 5kW of power. The prototype turbine will be 5 metres in diameter and will be located close to the electrical substation on the eastern edge of campus.

The wind turbine is being designed and built in the Department of Mechanical Engineering. The two 2.5 metre long blades will be made from fibreglass using moulds manufactured by a final year student on the Departments' Numerically Controlled Machining Centre. The blades act like a "reverse propeller" and, in conjunction with the rest of the system, are designed to get as much power out of low windspeed as possible. "The system will have a built-in control strategy which will ensure that the wind turbine is operating at optimal capacity relative to the conditions at all times," Dr Wood said.

Dr Wood explained that extending the electricity grid to an outlying house costs as much as \$15,000 per km. "We estimate that our wind turbine system will look

financially attractive," he said.

**"As a society we have to develop more alternate sources of energy, including tidal, wind and photovoltaic."**

Engineers at CICS are currently developing the generator control system. Drs Clausens and Wood expressed their gratitude to Shortland Electricity for their involvement in obtaining the ARC Collaborative grant and to CICS for "getting the project off the ground". Dr Wood stated that the initial support of CICS turned the project "from a daydream into reality".

"We plan for the system to be built by the end of this year," Dr Clausens said. "Our collaborative grant will enable us to conduct 18 months of field testing, so that we can 'iron out' any problems we may encounter," he added.

While they acknowledge that their wind turbine will never contribute significantly to overall energy supply, Drs Wood and

Clausens emphasise the importance of looking at alternative sources of energy and applying the right source of energy for the task in question. "As a society we have to develop more alternate sources of energy, including tidal, wind and photovoltaic," Dr Wood said, adding that such alternative sources will have a beneficial effect on the environment in the long run.

Dr Wood indicated that the potential for interaction of various sources of alternative energy within the system is large. Combining wind generated power with photovoltaic cells may prove to be an extremely useful combination, particularly in non-coastal areas. A microprocessor would be built into the system to control input, avoiding the production of excess power, with possibly a diesel generator providing back-up. Thus, wind, solar and diesel power generation would form a single, integrated system.

According to Dr Clausen the wind-turbine has potential for export to the South Pacific Islands and Asia. "We hope to market it to areas where massive power stations and large electrical infrastructures don't exist," he said. At a more local level, the wind turbine is likely to be used in the Hunter Valley to provide an alternative source of energy to remote areas.



Paul Ebert (squatting), Phil Clausens and David Wood are pictured with their fibreglass propeller blade

### CONVOCATION

Proudly Presents  
Professor Neil Rees  
Inaugural Lecture  
**"A Bill of Rights for Australia"**  
12.30pm Wednesday,  
October 14, 1992  
Lecture Theatre K202,  
Medical Sciences Building  
*Light refreshments will be served after the lecture.*  
Admission is free and everyone is welcome.

# PLEA FOR THE DEVELOPING WORLD

The reality of living with drought, war and starvation is, for many of us, difficult to contemplate as we relish in home comforts, consuming our three (or more) meals per day. But drought, war and starvation is a cruel reality for a very large proportion of the world's ever increasing population. What solutions are there, and what can we do to help?

Dr Demissie Habte, Director of the International Centre for Diarrhoeal Disease Research in Bangladesh, visited the University's Faculty of Medicine recently, extending a plea to scientists and medical practitioners. "Scientists in developed countries have to be interested in the problems of the developing world," he said. "We desperately need people with different areas of expertise to work with us to solve the world's many health problems. It is not too late yet," he added optimistically.

Dr Habte grew up in Ethiopia and undertook his medical education in Beirut, Lebanon, and in the USA. He was Professor of Paediatrics and then, for six years, Dean of the Faculty of Medicine at the University of Adiss Ababa, Ethiopia, before moving to Bangladesh to take up the directorship of the Centre for Diarrhoeal Disease Research.

He explained that the term "diarrhoea" in the Centre's name is somewhat of a misnomer. The Centre was established some 30 years ago as a Cholera Research Centre and has since expanded to encompass research into areas such as population, nutrition, diarrhoeal disease, women's health issues and other health problems affecting people of the third world.

It was the Centre in Bangladesh which, in the late 1960s developed an Oral Rehydration Solution (ORS), a glucose salt solution which is simple to prepare, inexpensive, can be made at home and eliminates the need for sophisticated health facilities for the treatment of diarrhoea. This concept of providing self help to the peoples of developing countries is a major focus of the Centre.

Dr Habte explained that the Centre is also looking at the health impact of non-health intervention, through education, literacy and empowerment to women. True to the adage that *prevention is better than cure*, the Centre is also conducting wide scale research into water purity and sanitation.

Of the 1000 employees of the Centre, 150 are actively involved in field and laboratory research in these areas. As an international institution, the Centre is funded by govern-

ments, international agencies and philanthropic associations, and is run by an International Board of Trustees.

"We address the major issues of health of the developing world - and one of these is population," Dr Habte said. Family planning programs which are sensitive to the culture of the people, are offered. In one of the world's poorest and most densely populated communities of Bangladesh, such a program was successfully introduced. According to Dr Habte, this program has now been adopted by the Government of Bangladesh, in an effort to combat their "most urgent population crisis".

The Centre is currently working towards establishing links with universities and research institutions around the world. Already links exist with institutions in the USA, UK, Switzerland, France, Belgium and Japan. Dr Habte said that the Centre also has growing links with institutions in developing countries, such as India. Newcastle University's Centre for Clinical Epidemiology and Biostatistics is being asked to establish training and research links alongside other links already being established in Clinical Pharmacology and the Social Sciences.

"I have heard of the Newcastle School of Medicine and the unique features of the School," Dr Habte said, adding that he met Professor Hamilton, Dean of the Faculty of Medicine, when he (Professor Hamilton) visited Ethiopia on behalf of the World Bank 10 years ago. Dr Habte described Professor Hamilton as "one of the leaders in the field of health in the developing world".

Dr Habte encouraged "young, aspiring health professionals" to work with the Centre in its effort to find solutions to the pressing health issues facing developing countries. "We can provide opportunities for these people to come to the Centre to learn about our research," he said.

"Ultimately the aim of our work is to improve the quality of life in developing countries," Dr Habte said.



# WHEN A PHOTO IS MORE THAN JUST A PHOTO

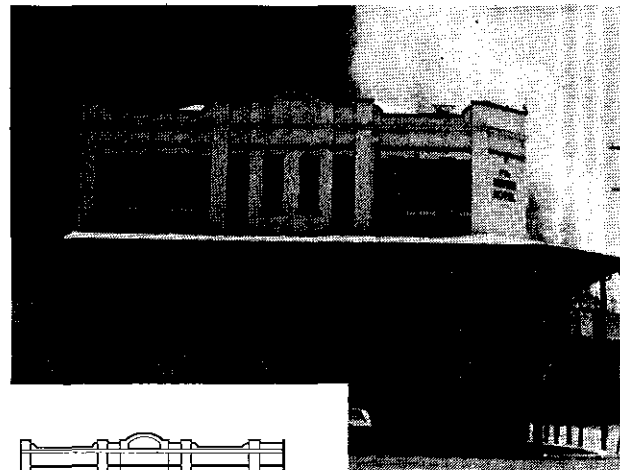
We've come a long way from the old Box Brownies. As cameras become increasingly more complex and widespread, so too does the application of photography. Photogrammetry is the science of obtaining the three dimensional size and shape of an object from two or more photographs. A non-contact, non-destructive method of obtaining size and shape information, photogrammetry has traditionally been conducted with cameras using film, but in the last few years, digital cameras which operate like TV video cameras have been used. These cameras feed the scene directly into a computer for image processing and image analysis.

Professor John Fryer from the Department of Civil Engineering and Surveying has been involved in

photogrammetry at this University since 1974. His expertise in the area was recognised recently when he was elected as President of one of seven Technical Commissions of the International Society of Photogrammetry and Remote Sensing.

Formed in 1910, the Society holds elections every four years, at which the Executive Committee and the Presidents of the seven Technical Commissions are elected. As President of Technical Commission 5, which deals with close range photogrammetry and robot vision, Professor Fryer is responsible for overseeing the development of new forms of remote sensing devices; the calibration and assessment of systems in use in industrial applications; their use in medical applications; and the recording of architectural and archaeological monuments, artefacts and works of art and treasure. A Working Group will be looking at image sequence analyses, that is, the type of movements which robots see and need to analyse as they move around.

"As President of a Technical Commission, it is my job to direct and investigate recent and developing trends in close range photogrammetry and robot vision," Professor Fryer explained. "In this way we will encourage collaborative research in this ever growing field," he added. As his Technical Commission includes five areas of research, Professor Fryer will select two co-chairmen for each of the five Working Groups. The chairmen elected so far come from



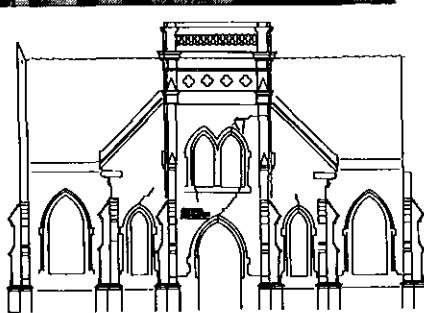
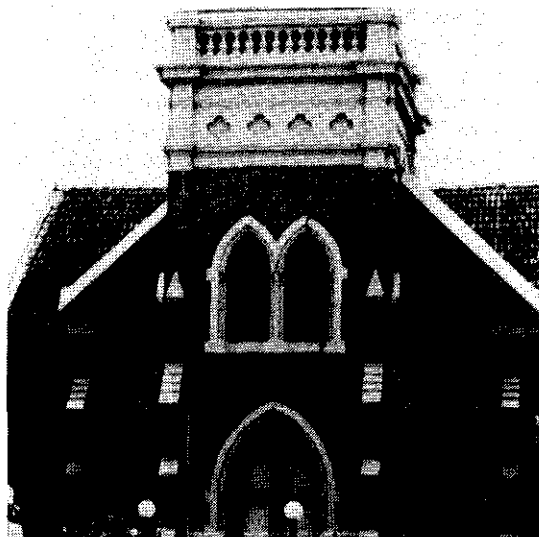
EASTERN ELEVATION

Canada, America, South Africa, Switzerland, Germany, Greece and Australia.

Photogrammetry has extremely wide application. In the

early 80's, Professor Fryer was involved in photogrammetric studies to determine the growth rates for coral colonies at the Institute of Marine Sciences, Townsville. Other applications include medical imaging (measuring a disformed back, or a body part before and after an operation); measuring mechanical components coming off a production line; or examining deforestation in Brazil. Australian researchers have used photogrammetry to reproduce Aborigine rock art from curved cavern surfaces in its correct dimensions on flat paper.

Professor Fryer will hold the position of President of Technical Commission 5 for the next four years and will attend conferences and meetings of the Society in Italy, Germany, China, South Africa and Austria, as well as organising an International Conference in Australia in 1994.



## YOUNG ENDEAVOUR SCIENCE AWARD TO CHEMISTRY GRADUATE

A recent honours graduate from the Department of Chemistry and University Medallist, Scott Donne, recently returned from a period of study in the United Kingdom as a Young Endeavour Scholar. The Young Endeavour Science Award is a prestigious scholarship offered to Honours graduates in all science departments to study at a tertiary institution in the UK for a

period of at least three months. Initiated in 1992, the scholarship, offered by the Federal Government, is valued at \$7000 and is awarded to only four candidates Australia wide.

Scott spent three and a half months at the Middlesex University in London, where he studied with Professor Frank Tye, a world leader in the field of manganese dioxide

battery research. The research carried out involved studying a crystallographically different form of manganese dioxide to that which is used in alkaline and Leclanche batteries at present. It has been shown by other researchers that this material, delta-manganese dioxide, when suitably



# FULL EMPLOYMENT: AUSTRALIA'S FUTURE OPTIONS EXPLORED

With unemployment currently rising to record levels in Australia, an Australian National University Professor recently delivered a paper to Newcastle University's Behavioural Sciences Faculty that offers a fresh approach and some hope for the future.

Professor Francis Castles' paper, *Policy Options For Full Employment: Which way forward for Australia?*, explores the relationships between a wide range of variables and the level of unemployment in 18 OECD countries over the period 1972-89.

Using multi-variate analysis on a pooled time-series data set, the study (undertaken for the Committee for Economic Development of Australia), leads to the conclusion that cross-national variance in unemployment levels can be better understood using a multi-disciplinary approach.

The traditional aims of economic policy to achieve full employment, stable prices and steady levels of economic growth, have been eroded in many countries with the passing of time. In the 1980s, in particular, the level of what is considered "acceptable" unemployment, discussions of the natural rate of unemployment, the real wage gap and "hysteresis" have almost relegated the full employment goal.

And while the full employment goal may be achievable it may be undesirable due to the consequences that follow. This is the contention of those that have contributed to the erosion of the full employment priority of Australia's economic policy-making, usually on the basis of economic theory alone.

Professor Castles' study revealed that whilst the average increase of unemployment of 4.22% between 1972 and 1988 in the 18 countries examined was a consequence of a gap between supply and demand for labour, the patterns of outcomes are markedly different in different countries.

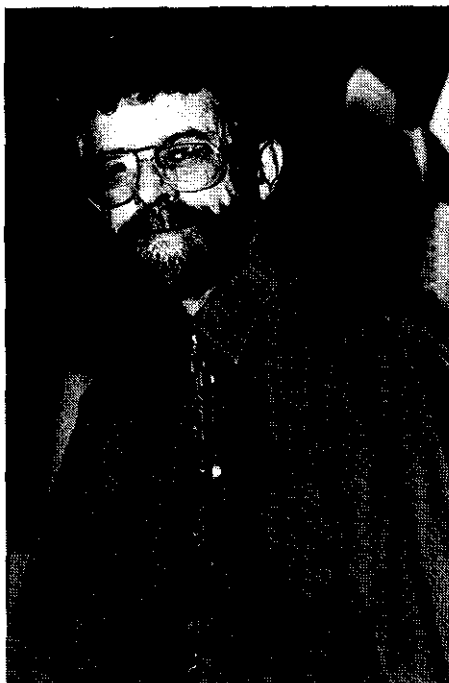
The study found three strategies had been successful in containing the growth of unemployment.

The first, called *Supply Restriction Strategy*, was best characterised by Austria, Switzerland, Japan and to some extent West Germany. These four nations were among those with the highest levels of industrial employment in the OECD.

They achieved these levels by encouraging a greater percentage of younger age groups in the working population to enrol in higher education and the deliberate use of welfare state entitlements to induce

older workers to quit the labour force through pensioned early retirement schemes, two measures used by the Hawke Government in a limited fashion, with some success.

But more significant were steps taken to decrease the percentage of foreign workers in the workforce and failing to formulate policies to facilitate the entry of women to the workforce. Figures reveal female participation in these countries between 1974 and 1989 rose by only 4.3%, compared to 17.8 percentage points in Norway, Sweden, Canada and the USA. Australia's female participation rate rose by 12.3 percentage points in that period.



Professor Castles

The second strategy for containing unemployment, called the *Welfare State as Employer*, is characterised by the Scandinavian countries. Faced with the task of preserving full employment despite a massive increase in the labour supply, these countries achieved it by expanding the service sector with the creation of Government employment, primarily in the welfare sector.

In the study period, they increased Government employment by over 7%, compared to an average growth of only 3% in other OECD countries. Although the levels of Government employment are relatively high in Australia (by OECD standards), there has been no increase in recent decades.

The third strategy, as characterised by

Canada and the USA, is the *Market Strategy*, with both these countries starting the 1970s with exceptionally high unemployment levels but avoiding a further widening of the gap between supply and demand, ending with levels around the OECD mean.

Professor Castles found the experience of other countries showed Australia has nothing to lose by pursuing full employment strategies. He found Australia was unable to pursue restrictionist policies as our employment structures were poles apart from those countries who have successfully implemented them.

Our industrial base was weak and uncompetitive, and the level of our service employment is high, as is the current level of female labour force participation. There is no obvious room for expansion in enhanced education enrolment and lump-sum superannuation pay-outs, indeed the Opposition's fightback program would raise the age for superannuation entitlement, lessening the restriction on supply of labour, thereby increasing unemployment.

Dr Castles also thought nearly half a century of successful multi-culturalism would founder on the proposal to return migrant workers to their countries of origin and the long march of women into the labour force could not be reversed, although its path would be conditioned by the speed of reform in areas such as pre-school provision and maternity leave, where Australia was far behind the leading nations.

He counselled Australia to take the least path of resistance and concluded that Australia cannot and does not want to be a welfare state along Scandinavian lines or like North American society in which unemployment is contained at the price of increased inequality and poverty and the creation of a permanent urban underclass.

Just as a number of European countries were able to consciously implement corporatist arrangements to avoid mass unemployment, Dr Castles thinks it is possible in Australia today.

The structural determination of unemployment outcomes in the 70s and 80s need not imply that we must accept high levels of unemployment as inevitable, Dr Castles said.

That need only be the case if we are unable, or unwilling, to forge new directions in the realm of politics and policy, he said.

**A** brilliant blue sky and pleasant spring temperatures marked the opening of the University's Environment Week. The Vice-Chancellor, Professor Keith Morgan officially opened the week's program by planting a tree, saying that although the Environment Week is a first for the University, an awareness of environmental issues has long been a focus of the University community.

"A sense of the environment is an implicit part of this University," he said. "We can thank our

founding fathers for their good judgement in choosing the site for this campus and for preserving its natural environment."

Professor Morgan says that he, like all of us working or studying at the University, should enjoy to the fullest, the opportunity of working in "such a splendid environment".

"Each of us must contribute positively to this environment and continue to strengthen the environmental policies of the whole University in years to come."



## UNIVERSITY COULD LEAD WAY ENVIRONMENTALLY

The Northern Region Manager of the NSW Environment Protection Authority (EPA), believes The University of Newcastle is well placed to become a Centre of Excellence in environmental management.

Speaking at the Campus Environment Week seminar, Brian Gilligan said no other University in the state is better placed to lead the way into the future for environmental management training, due to the range of activities going on around Newcastle and the diversity within the campus.

"The first step down the path for the University is to become an example of excellence in environmental management itself," Mr Gilligan said. "There is a niche for the University to take a wholly integrated and wholistic approach to environmental management that takes account of the communication and information technologies required to make management techniques and practices work," he added.

The University should apply a draft environmental management scheme and make sure it conducts its affairs in an exemplary manner and, through its links with industry groups, other institutions and government agencies, reach into the community and exemplify good environmental management, Mr Gilligan said.

Speaking to a small gathering at the seminar, Mr Gilligan discussed the role of the EPA, only formed in March this year, and the difficulties involved in environmental protection. He said the EPA has a dual role, firstly as educators and mediators guiding community-wide environmental protection and secondly, in policing pollution legislation.

While policing had become more effective, with fines of up to \$1 million for corporations found polluting the environment, and fines of up to \$200,000 and prison terms for individuals, Mr Gilligan saw the community role as the EPA's main focus. Describing involving the community in environmental protection as "incredibly difficult", Mr Gilligan said the EPA is committed to ensuring success in this area.

Mr Gilligan said that in the past, people have blamed others for environmental problems and looked to the "experts" for solutions, but the complexity of variables involved in most modern issues means the solutions are not simple.

"Essentially the EPA and other Government agencies are going to inform at a household level," Mr Gilligan said. "That form of environmental management requires different training and tertiary excellence than is currently available.

"I would welcome the opportunity for a continuing close association between the EPA and The University of Newcastle."

## WORKING TOGETHER

During the opening of the University's environmental lectures, Deputy Vice Chancellor (Administration), Mr Lance Hennessy expressed his support for Environment Week, saying that it is "terribly important" to develop strong associations between students, academics, University administration and the Board of Environmental Management.

"We have to work together to improve the global, regional and local environment," he said, adding that we must relate what is happening at a national and international level to what is happening in our "own backyard".

Mr Hennessy paid tribute to former University Planner and Architect, Dr Don Morris, for his visionary outlook and his determination to carry through the original concept of the bushland campus. "I believe that a few determined people can achieve a great deal," Mr Hennessy told the small gathering.

Also speaking at the opening was the University's Curator of Grounds, Mr Peter Stevens, who acknowledged that he will follow in the footsteps of Don Morris, Kevin McDonald and "other committed folk" in an effort to retain a truly "Bush Campus".

"It is not unreasonable to imagine this University setting an example in environmental management and landcare," he said.

# GRADUATE FOR NRMA COUNCIL

Communications graduate Mark Crosdale is standing for election to the Council of the NRMA, one of the largest motoring organisations in the world.

After Mark graduated from The University of Newcastle in 1990, he worked as a journalist and feature writer for Truck and Bus magazine, and later as a researcher for Federal Transport Minister, Bob Brown. He is now associate editor of Truck and Bus magazine which involves travelling across Australia and overseas to report on issues of interest to the road transport industry.

"I came to the University in 1987 after working for many years as an interstate truck driver. In that time I probably covered as many miles as an average motorist would in a lifetime," he said.

"There were very few vacancies in journalism when I graduated, but I was lucky because I could combine a good knowledge of a specialist area with reasonable writing skills," said Mark. "I advise present Communications students to do the same - combine knowledge in a specialist area with their skills as journalists. This should improve their chances of getting a job in the highly competitive field of journalism.

"Truck and Bus is a transport management magazine. We cover a broad range of issues related to road transport such as road safety studies, road construction, vehicle behaviour, fatigue and the like.

"I feel that this knowledge, combined with the experience gained working for a Federal Minister and many years of practical on-road experience, equip me well for the NRMA Council," Mark said.

He suggests that the NRMA needs advice on trucks and heavy vehicles. "It's time that professional transport operators and general road users began working together to improve the conditions for all motorists," he said.

"The road transport industry has taken a serious look at issues of safety and driver fatigue. This information is relevant to all types of driving and could be used to help all motorists, particularly those travelling long distances in country areas. For instance certain types of food, such as cheese, can induce fatigue."

He said that all motorists, particularly those who are unfamiliar with the demands of long-distance driving, can benefit from the research currently being conducted by the transport industry.

If elected as an NRMA Councillor, Mark said he will be pushing for an NRMA "Sharing the Road" safety campaign aimed at all road users, including heavy vehicle operators.

Ballot forms for the NRMA election will be contained in the September/October edition of the NRMA's "Open Road" magazine.

## ON THE RIGHT TRAC

Melinda Roberts, a Year 11 student at St Francis Xavier High School, is confident that she is heading in the right direction when it comes to preparing herself for the "real world". Melinda is one of 52 Newcastle and Hunter Valley students taking part in the TRAC (Training for Retailing and Commerce) scheme, a program offered to selected Year 11 and 12 students as a two-unit subject.

TRAC enables high school students to gain skills, experience and qualifications in the workforce while completing their schooling. The TRAC program is divided into two strands, a "customer service strand", oriented towards the "front counter" aspect of the retail, hospitality and finance industries; and an "office strand", which emphasises skills applicable to office work across a wide range of industries.

During the program, students learn new tasks common to both strands, including communication, time management and organisation, industry knowledge, maths, basic accounting, office equipment and customer/client relations.

Skills exclusive to the office strand include mail and correspondence procedures, office procedures and records management; while the customer service strand deals with marketing, promotion, product knowledge, stock control, cash handling and visual merchandising.

The University of Newcastle is one of close to 60 employers in Newcastle and the Hunter taking part in the TRAC program. Employers take in students for work placement one day every school week for a year. Students are placed in different types of businesses throughout the year and undertake "off the job" training in the TRAC Centre.

Melinda is the third TRAC participant the University has trained. Supervised by Mr John Hattander, from Staff Office, the students are taught a variety of office skills while gaining credits towards their HSC mark and advanced standing in TAFE courses. While Melinda admits that she is "a bit of a couch potato", she says that the

TRAC program is helping and encouraging her to obtain new skills and forcing her to work that little bit harder towards obtaining a good mark in the HSC. Prior to coming to the University for the office strand, Melinda worked at Mathers, where she gained knowledge about selling, ordering and purchasing.

"I think that TRAC should be made compulsory for all Year 11 students," Melinda said. "The skills we learn during the program prepare us for the 'real world' which we will all have to face in a year's time," she added realistically.

Course co-ordinator, Julie Fitzsimons says that students really have to do a "bit more work than average". "Some of our students find that they simply cannot keep up with the work load," she said, adding that others may leave the course as they get jobs. Seventy students started the program this year, with 52 students currently enrolled. The popularity of the program is highlighted by the fact that close to 200 high school students are hoping to undertake the TRAC program next year.

"Unfortunately we cannot accommodate 200 students in the course," Julie said, adding that they hope to find places for up to 120 students.

She says that when initiating the TRAC program, they concentrated on the retail industry as it is by far the biggest employer of young people. Close to half the jobs held by teenagers are clerical and sales jobs. And not only the students benefit from the program. Future employers are given access to a pool of highly motivated future employees, trained in a very broad area. Employers involved in the TRAC program include The University of Newcastle, NSW Department of Education, Newcastle Permanent, ABC Enterprises, MLC Life, the Hunter Port Authority and many more.



# SUBDIVIDING AUSTRALIA

The Great Australian dream of a quarter acre 1,000m<sup>2</sup> homesite is becoming rare in suburbia it seems. The move away from a large chunk of Australiana has been whittled down to less than 500m<sup>2</sup> per block. This is just one aspect of subdivisions 1990's style, as outlined in Graham Mallison's thesis *Towards a Uniform Subdivision Code*.

Graham Mallison recently completed his Masters degree in the Department of Civil Engineering and Surveying under the supervision of Brian Heaton. The code on which his thesis is based is to be submitted to various Councils and State Departments for the purpose of being adopted as the Code in New South Wales.

Graham is an Engineer with Lake Macquarie City Council. The completion of his thesis has proved more than just personally rewarding. It is practical and essential reading for developing quality subdivision practices in N.S.W.

For any large or small developer, there are many different regulations which must be adhered to. These regulations and advice have come about due to the many hundreds of hours that people such as Graham have been willing to devote to one subject.

*Towards a Uniform Subdivision Code* ensures that these codes are not a law of their own but work well with legal and planning requirements.

Graham's thesis, though specifically written for the City of Lake Macquarie can be easily applied to any Council area.

*Towards a Uniform Subdivision Code* examines what the public want, what Government has legislated and how this determines the character of N.S.W. subdivisions.

His thesis is also interesting for its historical look at the surge of housing in the late 70's, the Institute of Engineers' first attempts to standardise drainage codes and Soil Conservation's first guide on erosion control.

Councils often look to each other for guidance in dealing with new State Government legislation. This was the experience of Graham and the Engineering team at Lake Macquarie City Council. It is hoped that *Towards a Uniform Subdivision Code* provides the guidelines for cities to develop the way people would like, while reducing the impact developments have on the environment.

# MANAGEMENT SEMINAR

Newcastle University Master of Business Administration graduates have organised a major Management Conference to be held at Port Stephens on October 9 and 10. The event, which is expected to attract both local and interstate delegates, will focus on the theme, *Mastering Competitive Edge*.

The two day Conference is expected to become an annual highlight of the newly formed Hunter Branch of the Graduate Management Association, in association with the NSW Association based in Sydney. The 1992 Conference boasts an impressive speaker list including Hunter Area Health Service Administrator, Dr Tim Smythe; Corporate General Manager Technology and Development, Mr Peter Laver; and wine entrepreneur, Mr Brian McGuigan.

Topics to be discussed include *Education for the Competitive Edge; Ethics and the Social Environment; Case Studies in Excellence and Sharpening the Edge: Communication and Facilitation*.

Anyone interested in attending the Conference should contact Helen Parker on 21 5000 or Dale Bray on 27 3200.

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# FESTIVAL ANTHOLOGY

An anthology of short stories by young writers, compiled by a University of Newcastle postgraduate student will be launched at the Newcastle Museum next month.

The anthology, compiled by Mark Crowley, a Masters student specialising in Film Studies, has been produced as part of the NSW Youth and Arts Skills Festival by the University in a joint venture with the Newcastle Community Arts Centre. Called *Festival And Other Stories*, the book comprises 25 short fiction stories covering a wide range of topics, some written specifically for the Festival and all chosen to blend in with the Festival theme. The Youth Arts and Skills Festival is a bi-annual, statewide festival across the arts that is funded by the NSW Government.

Mark Crowley said 80% of the writers whose work is represented in the book are students, drawn from creative writing classes in the English Department and some from the Communications Faculty. The remaining 20% of authors were drawn from the wider community, in response to Newcastle Herald advertisements inviting submissions. They range in age from 18

to 27 years.

Mark received more than 50 submissions for the anthology and was given advice in compiling it by lecturer in the Department of English, Paul Cavanagh.

"I got a chance to work with a lot of the writers," Mark said. "I looked on the submissions as first drafts and would sometimes set up meetings with the writer," he added. "I was trying to build confident voices but it was left up to the writer to do any alterations...everyone was pretty amiable."

Mark compiled *Festival and Other Stories* in just 6 weeks, saying he was surprised at the topics tackled by some of the writers. It covers a whole range of things from sex, drugs and rock 'n roll to environmental issues and the segregation of groups of people, he said.

"I think this younger generation is more cynical," Mark said. "I'm 29. it's harder to put things over on them than I remember it was for me...but they still have dreams. There's a lot of fantasy involved in some of the stories, but there's a harder edge to things now," he said.



The 130 page book, with an initial print run of 750, will be launched at the Museum at 6pm on October 2.

*Festival and Other Stories* is published by The Star printery, with a cover photograph by University of Newcastle photography student and TUNCALT's photographic competition winner, James Rasmussen, and will be available through the University.

# CAMPUS

The University campus has for many years provided an ideal location for a greater number of students and staff to exercise and to run to improve their fitness. The Sport and Recreation Department (at that time called the Physical Education Department) was the organising body of the fun run which was named the "Campus Scamper".

In 1979 an "invitational teams event" was introduced into the programme. This year the event was held at the University of the South Pacific, Navy, Department of Corrective Services, Technical Colleges, and other institutions. A walker's course of approximately 2 km was "marked for the benefit of the community". Those expressing an interest in participating were encouraged to "make a good life."

On Wednesday, September 9, 1992, 104 students and staff gathered for the event. Others walked a 3 km course and had a lot of fun. One very keen student was not a sufficiently good excuse to keep him from the track. Accidents occurred but carrying the necessary instruments to deal with any emergency, he was not injured. Cutting did not occur!

T-shirts and open orders were presented to the placegetters in the mixed teams event. The winning team received the Commonwealth Bank of New Zealand Branch of the Commonwealth Bank who was the official starter for the event. They were afforded the opportunity to win an open order in a draw conducted by the bank.

The next Campus Scamper is less than a month away.

With a view to the future...

Ministry of Education...

Department of Education...

University of the South Pacific...

Department of Physical Education...



# CAMPER

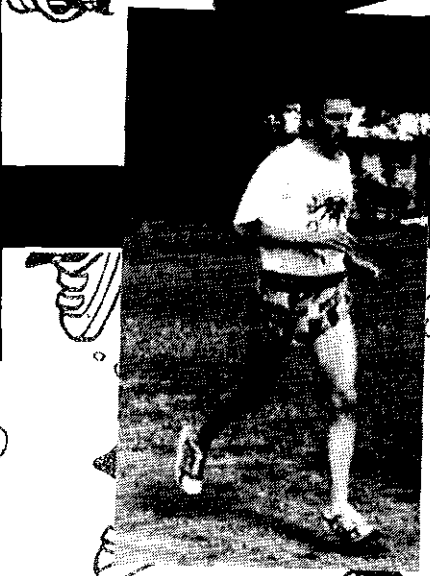
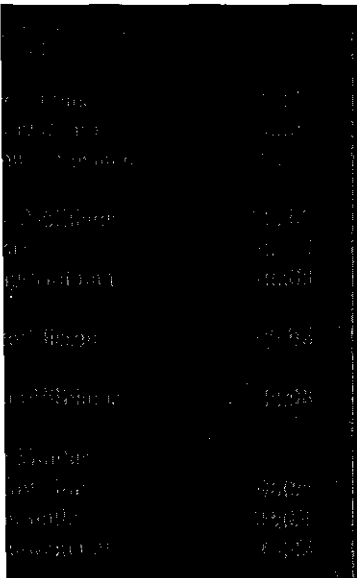
for cross country running. In 1972, in an endeavour to encourage a  
air fitness levels, the University Athletics Club organised a campus  
enities Office) subsequently assumed responsibility for the annual

and, during the years which followed, teams from the RAAF, Army,  
THE and high schools took part. Files also indicate that in 1984 a  
of the pedestrian-minded" of the University community and those  
our to have a pleasant stroll through the campus bushland and enjoy

No. 2 oval to once again attack the 5 km run. Not to be outdone, 31  
decided that a pulled calf muscle (or a broken leg - we are not sure)  
ed by a very attractive theatre-clad nurse (mask and all) and a doctor  
ted the running course on crutches. We have their word that corner-

g events. Eleven teams of three persons contested the male/female/  
x perpetual shield from Mr Ian Ireland, Manager of the University  
t. Although prizes were not awarded to the walkers, each participant  
at the completion of the day.

year away....start training today!



# A LIFE OF MUSIC

For most of us the thought of music conjures up images of relaxation or socialising. Not so for lecturer in Music Education with the University's Faculty of Education, Janice Allan, whose whirlwind lifestyle revolves around music and performances. Her enthusiasm is infectious and already her three children, aged 9, 12 and 14 are involved with music and are members of the Cathedral Choir.

Janice began her formal training in music jointly at the former Newcastle College of Advanced Education and the Newcastle Conservatorium of Music, where she completed a degree status diploma in Music Education. With the establishment of the Hunter Institute, Janice undertook a Bachelor of Music Education degree. In between, Janice completed an Arts degree at the University, studying Classical Civilisation, Latin and English. Still not satisfied with her academic pursuits, Janice



Janice Allan - rehearsals are a part of her life

is currently completing a Masters degree in Educational Studies, with the hope of starting a PhD next year in the area of Philosophy *in and of* Music Education.

In between lecturing and studying, Janice performs. As a Foundation Member of the Hunter Consort of Voices, on a *capella ensemble*, she (along with the other 9 members) has presented concert pieces in Newcastle, the Hunter Valley, Muswellbrook and Sydney. Janice is also a member of the Christchurch Cathedral Choir and as a dedicated performer, attends one practice session on Friday nights, two on Sundays and also sings in two services every Sunday. Her energy, enthusiasm and dedication is truly amazing.

Janice was recently invited to adjudicate at the Australian National Choral Championships, held in Wagga. The championship, described as Australia's richest choral music event, began modestly in 1990 attracting nine choirs. This year's

championship featured performances from close to 30 choirs. Held in August each year, the Choral Championship is designed to promote Wagga, involve the whole town and encourage musical interests. Six professional adjudicators, all university graduates in music, were chosen to provide constructive and soundly based assessments of each choir's work.

"The entrants learnt a great deal about public performance," Janice said, adding that the adjudicators ensured that each choir received written feedback about their performances. Choirs were able to compete in one of five sections: Advanced Chamber Choirs; Community Choirs and Choral Societies; Youth Choirs; Male or Female Choir and Male or Female Ensemble. According to Janice, the event was "beautifully organised" and highlighted the amount of musical talent existing within Australia.

Despite all of these commitments, Janice has managed to successfully combine work and homelife. "I have a very supportive mother, an after school nanny and make use of some excellent child-care facilities," she said. Janice says that the word *rehearsal* has been a part of the family's life since her children were born. "The kids know an enormous amount of work, musically speaking," she said proudly. Janice's husband, Christopher, is also involved in rehearsals and productions in his role as Arts Administrator for the Hunter Valley Theatre Company.

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## INTERNATIONAL AWARD FOR ACADEMIC

A University of Newcastle academic is to receive an international award in the USA next month for ground-breaking research allowing the evolution of landscapes over hundreds of thousands of years to be simulated on a computer.

Dr Garry Willgoose, a lecturer in the University's Department of Civil Engineering and Surveying, developed the world's first computer program capable of simulating the evolution of landscapes under the action of rainfall and erosion over geological time for his doctoral thesis. He will receive the 1989 Lorenz G. Straub Award, considered the top award for hydraulic engineering in the world, at the University of Minnesota on October 1.

Dr Willgoose, 34, prepared his thesis, which looks set to rewrite geomorphology textbooks, while undertaking research at MIT in Boston in 1989. Using a CRAY supercomputer and building on field work done by others, he succeeded in developing a mathematical model that can analyse and predict erosion patterns over periods as

long as 100,000 years, making it ideal for applications such as mine rehabilitation. The program has already been used to advise the Federal Government on the Ranger uranium mine, on the edge of Kakadu National Park.

The Government requires that the spoil heap at the mine be stable for 10,000 years, to ensure that radionuclides do not contaminate areas near the mine, a period previously incapable of being simulated. Dr Willgoose said his program allows the landscape around mines to be remodelled as it should be by predicting how it would look for thousands of years.

"I undertook the research out of an intrinsic scientific interest in understanding why the landscape we see out our windows each day looks the way it does," Dr Willgoose said.

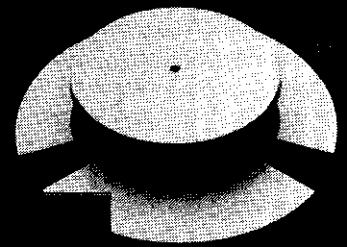
Dr Willgoose began work on his PhD at the Massachusetts Institute of Technology after graduating from the University of Newcastle in both Science, with a major in Mathematics, and Civil Engineering, with



the University Medal.

The Straub Award, established in 1965, honours the founder of the St Anthony Falls Hydraulic Laboratory at the University of Minnesota, with theses submitted from universities worldwide and reviewed by their peers for 18 months before the winner is announced. Dr Willgoose will receive a silver medal and a cash award from Dr Anne Petersen, the Vice-President of Minnesota University and Dean of the Graduate School, before speaking at a special colloquium at the Hydraulic Laboratory.

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# CAUGHT STEALING A BUSHEL OF WHEAT!

Margaret Owens, who works as "refreshment co-ordinator" in the University's Chancellery building boasts an extremely exciting family history. Her interest in tracing this history led to a deeper understanding of and passion for local and family history in general. She now holds the position of President of the Newcastle Family History Society Inc.



Margaret Owens - great grand niece of Newcastle's first Lord Mayor

Margaret started researching her family history at the University Library in the late 70s and undertook a WEA course conducted by Dr Noeline Kyle in 1982. Along with other attendees at this course, Margaret joined a study group which, in 1983, became the Family History Society. As a Foundation Member of this society, Margaret held the position of Treasurer in 1985 and 1986, and President from 1987-1989 and again in 1991 and 1992.

Margaret is considered one of the "lucky" family historians, having a large number of convicts among her ancestors. Margaret, who is the great grand niece of Newcastle's first Lord Mayor, James Hannell, says the Hannell name can be traced back to the early 1800s, when a "second charge" convict woman arrived in Newcastle. This woman, much to the disgrace of the society of the time, gave birth to a daughter and three sons, one of who was James Hannell, and one of who was Margaret's great grandfather and Newcastle's Lighthouse Keeper.

But Margaret has traced her family history back further than this. She tells of her great, great, great paternal grandmother, Ann Marsh, who was convicted in 1788 for stealing a bushel of wheat, and who arrived in Australia aboard the "Lady Juliana" in the

Second Fleet. Ann, who was sentenced to seven years, married three times, firstly to the ship's surgeon, secondly to John Irving (the first emancipated convict in the Colony), and thirdly to Robert Flanagan.

Margaret has a wealth of information to offer local and family historians. As president of the Newcastle Family History Society, Margaret is also the Convener of the NSW Association of Family History Societies 9th Annual Conference to be held in Newcastle from October 16 to 18. The Conference will feature local speakers only,

covering topics such as *Maritime History, A Tribute to Our Australian Ancestors, Newcastle's Best Kept Secret* and *Romani Research*.

The focus of the Conference was deliberately kept within Newcastle and the Hunter Valley, as there is, according to Margaret, a wealth of knowledge about family and local history within this region. Anyone wishing to attend the Conference should contact Margaret Owens on 533 265 or at the Chancellery between 9.30am and 2.30pm.

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## UNIVERSITY VENUE FOR CHILDBIRTH SEMINAR

A seminar designed to explore the expectations, evaluation and experiences of childbirth will be held at The University of Newcastle.

The seminar, which is to be held at the Griffith Duncan Theatre on Saturday, October 3, is being organised by the University's Faculty of Health Sciences and the Hunter Valley Homebirth Association.

According to its organisers, the seminar is being held in response to a perceived need for information about childbirth, what to expect, the experience itself and understanding the issues surrounding childbirth.

Spokesperson, Bethne Hart, a health sociologist in the Faculty of Health Sciences, said the day had been comprehensively planned to take in as many aspects surrounding childbirth as possible.

Bethne said that the opening address would be given by Sheila Kitzinger, an internationally acclaimed social anthropologist and author of many books about pregnancy and childbirth. Following this, sessions entitled *Expectations: What we bring to the birth of a baby* and *Evaluation of care: The benefits of knowledge and the costs of ignorance* will be held. An audio-visual presentation entitled *The Experience of Birth* and a Discussion Panel entitled *Towards Understanding Issues surrounding Childbirth* will form the afternoon's activities.

Bethne said that a series of optional segments can be attended during the day. These include, Birth plans: making them work for you; Womens' Business: Dreamtime Babies; Setting up pregnancy support groups; Attitudinal Healing: Addressing fears and relationships before giving birth; Caregivers role in meeting family's needs; Who gives birth at home

and why; Images of Breastfeeding: Icon of Motherhood; Homebirth in Australia 1985-90; Choices and Chances: Influences in Decision-Making; Experiences of Breastfeeding: The Needs and Demands; A Workshop for Fathers: What are men "supposed" to do?; Practicalities of homebirth; When the blues turn black: Understanding feelings after childbirth; Belly-dancing: An expression of womanhood.

"This is an important event for anyone who will be giving birth soon or who is planning a pregnancy in the near future," Bethne said.

"A wide range of topics will be covered and we have put a lot of thought into the program. It has generated a lot of interest and excitement and we are looking forward to a positive response from our participants.

"Our speakers are eminent people from throughout the Hunter Region and Australia with a number from overseas.

"What we aim to achieve through this seminar is to give women the knowledge, strength and connections to be able to give birth how they choose, whether it be a homebirth or a hospital birth. We also aim to raise the awareness of professional care-givers and the community of their responsibility to listen to what women want and need around childbirth," she said.

The cost for attendance at the seminar is \$60 which includes lunch and morning and afternoon teas. Student/pensioner concession is \$30.

Further enquiries and bookings can be made by contacting Bethne Hart at The University of Newcastle on (049) 21 6303 or Julie Lang on (049) 34 1324.

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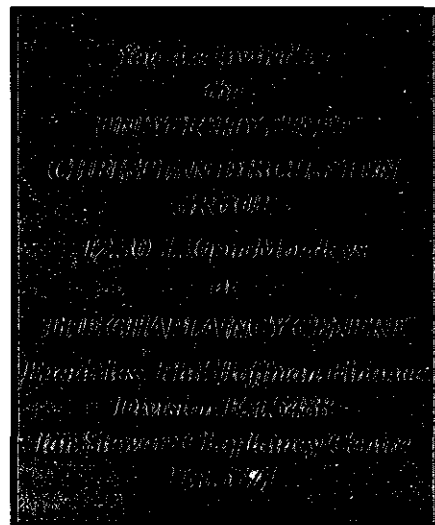
# AROUND THE CAMPUS



Several chess enthusiasts in the University have decided to rejuvenate the University Chess Club. This group will meet every Tuesday at 12.30pm in Room R111 (Middle Floor) of the Geography Building. It is hoped to field a team in the local Newcastle Competition in future but to do so we will need players!

Anyone interested in playing chess, either at lunch time or in the competition (at night) is welcome to attend. At this stage we have no equipment so players bringing chess sets and clocks will be especially welcome. Enquiries can be directed to Dr McIntyre on extension 5090.

**"LEAVE-YOUR-CAR-AT-HOME"** day proved moderately successful, with 189 (or 9%) fewer cars entering the grounds on Thursday 17th, compared to the previous Thursday.



## RETIREMENT DINNER FOR BILL MALEY

A farewell dinner for Bill Maley, the recently retired Head of the Department of Educational Studies will be held on board the **South Steyne Floating Restaurant**, Merewether Street Wharf on Thursday, **October 29**, at 7.00pm.

Colleagues and friends (together with their partners) wishing to attend should contact Neil Wright no later than the first week in October. In speaking about Bill Maley, Neil said that his many contributions to the University are highly valued and unquestioned. Neil invites anyone interested to attend the dinner to express gratitude for Bill's friendship and professional endeavours.

The cost of the dinner is \$33 per head which includes a gift contribution. People unable to attend may wish to contribute \$5.00 towards a gift. Please contact Neil Wright for bookings or further information on 216431 (work), 432740 (home) or 216445 (Departmental secretary).

## PUBLICATIONS FOR LOAN

The following publications are available for short-term loan from the Office for Research, level 2, Chancellery, telephone 21 5305.

- Land & Water Resources Development Corporation**  
Research & Development Plan 1992-97  
Compendium of Research in Progress  
Compendium of Research & Development Reports
- Cooperative Research Centres Program**  
CRC Connections, May 1992  
CRC Compendium 1992
- Health, Housing and Community Services Research and Development Grants**  
Directory of Funded Projects
- Grains Research and Development Corporation**  
Annual Report 1990-91
- Honeybee Research and Development Council**  
Annual Report 1990-91
- Urban Water Research Association of Australia**  
Annual Report 1990-91
- Australian Centre for International Agricultural Research**  
Partners in research for Development, April 1992
- CSIRO**  
Strategic Plan 1991-92 to 1995-96  
Division of Horticulture - Report 1989-91

## SUPPORTING STUDENTS

The Learning Support Unit has been established to help all students with their academic work. Students experiencing difficulties with **studying (in general); preparing for exams; library research; essay/report writing; seminar presentations or mathematics** may call the Learning Support Unit to discuss problems.

The Learning Support Unit is open for consultation from Monday to Friday between 1.30pm to 3.00pm. Appointments are not necessary within these hours, however, may be made for other times by ringing 21 5890.

The Learning Support Unit is located in the Computer Teaching Building (building CT, room 325). For all enquiries phone 21 5890.

The Land and Water Resources Research and Development Corporation has recently published its 1992-1997 Research and Development Plan. Copies are available from Dr Phil Price, Executive Director, Land and Water Resources Research and Development Corporation (telephone 062-2573379) or from Diana Day (extension 5556).

# ADVERTISEMENTS

## FOR SALE

The Department of Modern Languages has for sale by tender or inter-departmental transfer the following equipment:-

1 x VIDEO, sony umatic cassette recorder V02630, dusty but not damaged, Plant Number 7380.

1 x TYPEWRITER, Manual Olympia Wilhelmshaven in excellent condition.

1 x TAPE RECORDER, Reel to Reel Tandberg with carry box, Plant Number 1692.

2 x TYPEWRITER, Word Processing, Adler in working order, Plant Number 104607 and 3688.

1 x TYPEWRITER, IBM Electric model 82 in excellent condition.

1 x TYPEWRITER, electric Adler type EB with manual.

1 x TYPEWRITER, Manual Lexikon 80 (antique).

1 x PRINTER, Epson LQ1000 Model P18EA, dusty but not damaged.

1 x Desk, ergonomic and 4 drawer unit in good condition.

For further information please contact Modern Languages Secretary, Lindy Burns.

Tenders close at 11.00am on Friday October 9, 1992 and should be addressed to "The Purchasing Officer" clearly marked "tender for equipment" Purchasing Department, University of Newcastle 2308.

*The University reserves the right to reject any or all tenders.*

## FOR SALE

1 Mirage Sport Rowing Machine \$175, telephone extension 6540.

Pale blue velvet curtains. As new, fully lined, to fit window 6' wide, 6'6" drop (floor length). Track included, \$180. Telephone extension 6633.

1982 Datsun Stanza automatic, 2L, 6 months registration. Good condition, \$2,500. Please telephone Evelyn Read on extension 6002, or after hours on 571043.

Moto Guzzi V50 Monza 1984, as new, 12,000 klms. 3 months registration, gearsack rack, \$4,800 phone extension 6518 or 263638 (bh).



Frigide, 200litre, reconditioned frigidaire, works well, \$120 o.n.o. Phone David Arthur on extension 5773.

## WANTED

Ansonia mantle clock - wooden, going or not. Please ring Diana on extension 5556.

## FOR RENT

Heritage listed Terrace House, Islington. 4 bedrooms, renovated, newly painted throughout, new carpet, northern aspect, \$140 per week. Telephone 526238.

NEW LAMBTON HEIGHTS - Professional/Mature-age student, non-smoker, 25 years plus, to share 2 bedroom flat with staff member. Large yard, quiet location, close to Uni, bus, train. \$300 per month plus expenses. Would suit Sydney commuter. Available 6/10/92. For further details, please telephone extension 6570 or 57 2857 (ah).

Self-contained fully furnished 1 bedroom unit to suit student or academic. Prime location near beach and shops. Covered parking. Solid, quiet and very neat. \$115/week. Ring Bruce on 215985 or 215966 (bh); 265309 (ah). 4/26 Memorial Drive, Bar Beach.

WATERFRONT COTTAGE at Brightwaters, 2 bedroom, double carport, large storage shed. No smoking or pets, car-pool operating. \$120 per week, phone David on 215832 (bh) or on 771540 (ah).

MAYFIELD - Federation style unfurnished home. Quiet street, close to shops and transport. Suit postgraduate students or family. Five bedrooms, three bathrooms. Huge living area, lock-up garage. Situated on three blocks of land. Excellent condition. \$350 per week negotiable. Phone 673544 or 574520 (ah).

# LETTER TO THE EDITOR

Dear Editor,

I note with delight that our Bulletin (not to be confused with any other publication of a similar name) is "published on a fortnightly basis". So much more refined than merely being published fortnightly.

A.W. Sparkes.

## SCIENCE AWARD

Continued from p3

doped with foreign species such as lead and bismuth, exhibits a high degree of rechargeability, well in excess of the manganese dioxide battery materials used at the present time.

The research conducted by Scott clarified some of the properties of the undoped material when it was reduced in a way similar to that which occurs in a battery. Furthermore, some significant new findings arose from the research concerning the structural changes that occur during reduction.

Scott is continuing his studies at Newcastle as a doctoral student, supported by an APRA (Industry) scholarship in association with the Australian Manganese Company Limited, which was obtained by Dr Ron Fredlein and Associate Professor Geoff Lawrance of the Metals Chemistry Group in the Department of Chemistry.

UNIVERSITY OF NEWCASTLE  
BULLETIN  
SATURDAY OCTOBER 10  
Enquiries please telephone  
6322 5700, 6322 7111

## OFFICE FOR RESEARCH

Further information and relevant application forms are available from the Office for Research - telephone 215305.  
This list is also circulated to all Heads of Department on a fortnightly basis.

### GRANTING BODY

*Closing Date*

- Rural Industries R & D Corporation** 2 October 1992  
Preliminary Proposals for 1993/94 Funding.
- Maxwell Ralph Jacobs Fund** 21 October 1992  
Nominations for 1993 Awards in forestry research.
- Rebecca L Cooper Medical Research Foundation** 3 November 1992  
Grants for research in the fields of Arthritis, Diabetes, Schizophrenia, Lung Diseases (excluding Cancer) and the medical applications of Genetic Research.
- Scientific Exchanges with China - 1993/94** 24 November 1992  
Australian Academy of Science. To support collaborative research between Australian and Chinese scientists.
- Coopers & Lybrand Accounting Education and Research Fund** 21 December 1992  
Research projects in an accounting-related area. Preference for projects that lead to a post-graduate degree and deal with current and topical problems.

### FELLOWSHIPS, CONFERENCES & PRIZES

- AMRAD Post-doctoral Awards** 6 October 1992  
To support Australian post-doctoral fellows returning to Australia to establish careers in the general field of biomedical research or related fields after a period overseas. Applicants must have more than 5 years post doctoral experience and be Australian citizens or permanent residents.
- Postdoctoral Fellowships in Japan Australian Academy of Science** 23 October 1992  
Awards for scientists 1993/94.

### NO SET CLOSING DATE

- Local Government Association of South Australia.**  
Small research project of \$2,000 or less in any field, of general benefit to Local Government in S.A.
- Alexander Von Humboldt-Stiftung Sponsorship Programme: Humboldt Research Fellowships For Foreign Scholars.**  
Awarded to highly qualified scholars of all academic disciplines, up to 40 years of age, for post-doctoral research project of their own choice in the Federal Republic of Germany; Max Planck Research Awards for Foreign and German Scholars; Research Fellowships for German Scholars.
- The British Council Travel Grant Scheme**  
Under this scheme British specialists are assisted to visit Australia. Approx 100 travel grants are awarded each year.
- The British Council Academic Links & Interchange Scheme (ALIS)**  
Provides international airfares for the staff of universities and other degree awarding bodies in Australia and Britain to visit each other.
- The British Council Visitors Scheme**  
Intended to assist Australian professionals on visits to the UK.
- The Institution of Engineers Australia-International Conference Support Scheme**  
Support for selected international scientific, technological or engineering conferences.
- National Campaign Against Drug Abuse.**
- DITAC Access to Major Research Facilities Program**  
To facilitate travel to major research facilities overseas. Apply at least 7 weeks before intended date of travel.
- NSW Education & Training Foundation**
- BHP Community Trust**
- RADGAC - Department of Health, Housing & Community Services Medical research and targeted research areas.**
- Research Management Committee Travel Grants**
- Research Management Committee Research Visitor Grants**
- Wellcome-Ramaciotti Research Travel Grants** - Available to postdoctoral bio-medical researchers.
- DITAC National Teaching Company Scheme** -Links between companies and research institutions. Provided support over two years for high-calibre graduates working on projects designed to improve company performance. Submissions considered quarterly

## SOFTWARE SALES

### Staff and Students

Students and staff may purchase the latest Microsoft® and WordPerfect® software from the Software Sales Office of University Computing Services.

UCS offers substantial savings on the recommended retail price of selected software for the private use of bona fide staff and students.

Watch out for our regular specials which offer further discounts.

SOME OF OUR CURRENT PRICES  
(AS AT SEPTEMBER 1, 1992) ARE:

|    |                                  |       |
|----|----------------------------------|-------|
| PC | WordPerfect 5.1 DOS              | \$170 |
|    | Wordperfect 5.1 for Windows      | \$170 |
|    | DrawPerfect                      | \$175 |
|    | MS-DOS 5.0 Upgrade               | \$110 |
|    | Windows 3.1                      | \$160 |
|    | Microsoft Excel for Windows      | \$205 |
|    | Microsoft PowerPoint for Windows | \$205 |
|    | Microsoft Works DOS              | \$ 90 |
|    | Microsoft Works for Windows      | \$105 |
|    | Microsoft Word DOS               | \$145 |
|    | Microsoft Word for Windows       | \$205 |
|    | Microsoft Publisher for Windows  | \$105 |
|    | Microsoft Project for Windows    | \$315 |
|    | Microsoft Fox Pro                | \$310 |

|     |                      |       |
|-----|----------------------|-------|
| Mac | WordPerfect          | \$135 |
|     | Microsoft Excel      | \$205 |
|     | Microsoft Word       | \$130 |
|     | Microsoft Works      | \$105 |
|     | Microsoft PowerPoint | \$165 |

**NOTE THAT PRICES ARE SUBJECT TO CHANGE  
WITHOUT NOTICE.**

The UCS Software Sales Office is located in Room A100 of the Hunter Building, telephone 21-6424. The office is open at the following times during semester:

|                             |           |
|-----------------------------|-----------|
| Monday - Thursday           | 9am - 5pm |
| Friday                      | 9am - 4pm |
| Other times by arrangement. |           |

## NEW VISION

The Newcastle Region Art Gallery is currently featuring *New Vision*, the works of fifteen local photographers who have achieved success in national and international photographic competitions.

*New Vision* concludes on October 11. Please phone the Gallery on 293263 or 263644 to arrange for guided tours; or visit the Gallery between 10.00am and 5.00pm Monday to Friday, between 1.30pm and 5.00pm Saturday, or between 2.00pm and 5.00pm Sunday and public holidays.

## FOOTLICE COMEDY

Footlice Theatre is proud to present *Laughter Shock*, a "quake comedy by some Novocastrians who were in Newcastle at the time". *Laughter Shock* will be showing at 8.00pm, Tuesday to Saturday, until October 10 at the Community Arts Centre, Hamilton. Tickets cost \$10 or \$6 concession.

And, for one week only, Footlice will be presenting superb holiday entertainment, Richard Howard's *A Knight To Remember*. Will Princess Cynthia find her true love? Will the squire ever do anything right? Find out at Fort Scratchley, 11am, noon and 1.00pm until October 2.

From Wednesday, October 14 you can catch *The Golden Antelope* at Lakeview Street Theatre, Speers Point. This Agatha Christie style whodunnit parody, written by Chris Fletcher and Brian Birkefield was one of Footlice's most popular early shows.

Phone the Footlice Theatre Company on 615545 for more information.

## NEWCASTLE UNIVERSITY HANG GLIDING CLUB

Introduction day October 18

Williamstown Sand Dunes

Experience the thrill of flight for just \$32 plus \$8 for membership

For more information and bookings phone

Ken 61 2458

Neva 57 3069

## GIVE BLOOD

The final visit of the  
Royal Newcastle  
Hospital and  
District Blood  
Transfusion Service  
Mobile Blood  
Donor Unit will  
take place on  
Thursday 29  
October, 1992. The  
mobile unit will be  
located between the  
Auchmuty Library  
and the Shortland  
Union Building.

### THE BULLETIN

Published on a fortnightly basis, the Bulletin disseminates campus news to staff and students of the University, to graduates, community leaders and members of the media. Copies are also circulated to students of the University Conservatorium of Music and the Central Coast Campus. The Bulletin is produced and edited by Sonja Duncan, with layout and design by Gill Hughes. Letters to the Editor (no longer than 300 words and signed); reports on outstanding and unusual research; news- and human-interest stories and advertisements are welcome.

Please contact either  
Sonja Duncan or  
Rosemary Roohan at the  
University's Information  
and Public Relations Unit on  
21 6440 or 21 6463.  
The Bulletin is printed on  
Environmentally Friendly paper.

