



Three-year CRES study of Hunter Valley completed

Short-term air pollution seen as main hazard

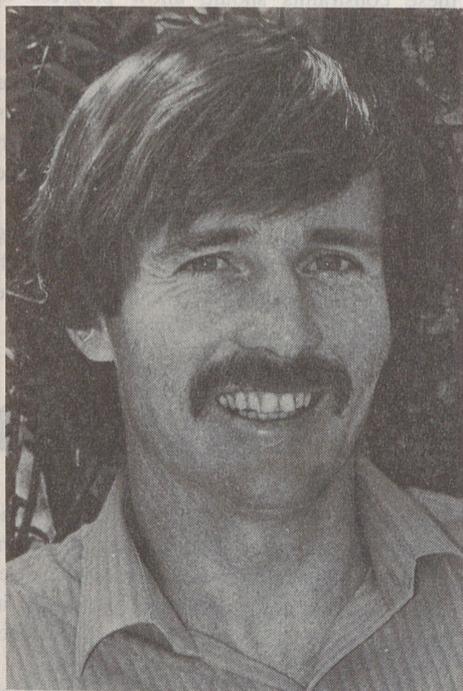
A three-year environmental study of the Hunter Valley by ANU scientists has found that air pollution in the region is not severe enough to have any long-term adverse effects on people living there, but that in the short term pollution may sometimes be high enough to represent 'a level of concern'.

The air pollutants of major concern in the Hunter region are sulphur dioxide, dust particles and probably nitrogen oxides, the scientists say.

The pollutants come mainly from open-cut coal mines, power stations, aluminium smelters and other energy-intensive industries, and from heavy traffic exhausts.

Violations of the United States Environmental Protection Agency's short-term primary air pollution standards which have occurred at places in the Hunter Valley may present 'a level of discomfort' to more susceptible members of the population such as those with bronchial complaints, the researchers warn.

However, the major air quality effect in the Hunter Valley is seen as the 'loss of amenity' incurred by populatins suffering dust fallout on the fringes of open-cut coal mines.



Dr Jakeman

The Hunter Valley study was begun in mid-1981 with the help of an NERDDC grant by a team from the ANU's Centre for Resource and Environmental Studies (CRES). It was the centre's first major inter-disciplinary project. Its aim was to identify interactions between coal production and related activities on the one hand, and the environment, social values, political priorities and economic forces on the other

— in this way ensuring that public policy issues could be considered and options presented. Since the project began, as many as a dozen researchers have worked on it for varying periods of time.

Two of the researchers, Dr Tony Jakeman, a Senior Research Fellow and currently Acting Director of CRES, and Dr Rod Simpson, a Visiting Fellow, have been responsible for the air pollution study, one of the major parts of the project.

In the Newcastle area they identified air pollution problems as being due to high acid gas concentrations and dust, mainly from the local steelworks and fertiliser plants. The acid gas pollutants include sulphur and nitrogen oxides. Ozone levels were sometimes high and there was also a lead problem at Boolaroo which seemed to be due more to industrial pollution than to motor vehicle pollution, they say in their report.

Both annual mean levels of acid gas and short-term levels were found to be 'quite high', but dust readings were low enough to indicate a low risk to public health from the combination of these two pollutants.

'The CRES modelling suggests that a low-risk strategy would be to avoid any significant increase in acid gas emissions above present levels, while a doubling of emissions leading to suspended particulates could be tolerated,' the researchers say.

'Natural gas with its lower sulphur content has started to replace oil burning as an industrial energy source. If this substitution becomes substantial, then it should not be difficult to maintain such a strategy.'

On the question of pollution from aluminium smelters, the researchers say that an analysis of fluoride data in the vicinity of the region's two smelters indicates that 'the fluoride problem is basically in check at the moment'.

However, some high fluoride levels had been found in forage and vegetation, and in the air, within a five-kilometre radius of the smelters.

Outside this area, fluoride standards set by the State Pollution Control Commission were not being violated on an annual basis, but they were being exceeded for the Kurri Kurri smelter on a monthly basis, 'which indicates that there is some chance of damage if a sufficient number of consecutive high pollution months are encountered in a growing season.'

The researchers add that emissions from the Kurri Kurri plant are to increase this year with the starting up of a third production line.

'This increase [in fluoride pollution] could be as low as 10 per cent, but it could be as high as 50 per cent, depending upon the precautions taken,' they warn.

'A 10 per cent increase may have little impact, but any large increase above that could exacerbate ambient levels and significantly



A dragline mining coal at Ravensworth in the Hunter Valley . . . dust fallout a major problem.

increase the risk of damage to sensitive vegetation species. Certainly, any new development proposals which increase the present load of fluoride emissions in the vicinity of Kurri Kurri, as probably would have occurred if the Lochinvar smelter went ahead, should almost categorically be rejected.'

Discussing the attitude of residents affected by pollution in the Upper Hunter region, the researchers say that the environmental effects of open-cut coal mining are considered to be primarily of a nuisance value by 40 to 60 per cent residents, depending upon locations.

A significant proportion of residents felt that they incurred some hardship, such as the need to do extra cleaning, yet on the other hand the majority of residents (87.5 per cent) in the worst-affected area rated their location no less highly compared to previous places of residence. 'Over 60 per cent had lived elsewhere, yet they still enjoyed living in the Hunter Valley,' Dr Jakeman comments.

The survey analysis also revealed that there seemed to be no significant differences in health problems between the mining and non-mining regions surveyed. In particular, there were no significant differences in the occurrence of bronchial problems for different dust-fall levels.

'In summary,' the report adds, 'it is fair to say that the quality of the Hunter Region's atmospheric environment is not in as poor state as a number of other industrialised regions of the world. Annual average levels of pollutants are not exceeding ambient air quality standards.'

Commenting to the *ANU Reporter* on the results of the project, Dr Jakeman said that although the large-scale expansion of mining and industry predicted for the Hunter region in the early 1980s had not taken place, he did not feel this in any way invalidated the study.

'There is no guarantee that there won't be an industrial and mining boom again,' he said. 'Our study has provided valuable options for importing the benefits the community can get from resource development, and for minimising the adverse impacts resulting from such development.'

'The present slowdown in industrial expansion provides valuable breathing space for decision-makers to look at these options and plan so they can meet acceptable air quality criteria when the demand for coal increases again.'

**The detailed findings of the Hunter Valley study are being published by CRES over the next few months in monograph form.*

Lectures by Tibetan lama

A Tibetan lama, Sogyal Rinpoche, is to visit the ANU to give two lectures early next month.

Rinpoche was brought up in Tibet by a Buddhist master and later came to the West to study religion at Cambridge University.

He began teaching in response to what he saw as a widespread misunderstanding of Eastern religion. In 1980 he established the Rigpa Fellowship, an educational and religious charity, to give a formal structure to the expanding scope of his work. There are now Rigpa centres in London, Paris and California, as well as groups of students in several other countries, including Australia.

Rinpoche has been particularly interested in working with scientists, doctors and other members of the caring professions, to develop and explore the growing common ground between Eastern philosophy and modern Western scientific research, and to see what contribution each can make to the other.

Rinpoche's first public lecture at the ANU is entitled 'In the Mirror of Death: Life, Death and the Tibetan Book of the Dead', and will be given in the Link Lecture Theatre, Faculty of Asian Studies, at 8pm on Tuesday 4 June.

His second lecture, on 'Healing Arts of Tibet', will be given in the Haydon Allen Tank on Wednesday 5 June at 1pm.

Neutron expert joins research school

Professor John White, a chemist of high acclaim who has been in the forefront of the development of neutron-scattering techniques, has joined the University as Professor of Physical and Theoretical Chemistry in the Research School of Chemistry.

He succeeds Professor David Craig, under whom he studied at Sydney University in the 1950s.

Professor White comes to the ANU with top credentials in his field, including the directorship of the prestigious Institut Laue-Langevin, which operates the joint French-German-British High-Flux Reactor at Grenoble, France.

Australian-born, Professor White went to Oxford to do his PhD after winning a Royal Commission for the Exhibition of 1851 Scholarship, and studied under Professor (now Sir) Rex Richards. In 1959, when he began his work at Oxford on nuclear magnetic resonance (NMR) spectroscopy, it was then a very new field. 'My aim was to learn about it and put it into action', he told the *ANU Reporter*.

Before he had completed his doctorate he was given a fellowship at Lincoln College in conjunction with an Imperial Chemical Industries Fellowship to study NMR.

'We were given a large grant by the Paul Instrument Fund of the Royal Society of London to develop a new instrument — the High Resolution Electron Nuclear Double Resonance Spectrometer. That worked very well and was used by a lot of people,' he said.

In the years that followed, Dr White began to develop the use of neutron inelastic scattering for the study of chemical problems.

'That was a technique beginning to be rather important in solid state physics and liquid state physics, as well as magnetism. Looking from the point of view of my background in nuclear magnetic resonance I thought it might have some potential for physical chemistry,' he said.

But using the new techniques to investigate molecular systems had its problems, and the first few years proved disappointing. It was not until Dr White and his colleagues built a new spectrometer with much higher resolution than had been available, that the new application yielded worthwhile results. He was awarded the Marlow Medal in 1968 by the Faraday Society for the development of chemical aspects of neutron inelastic scattering.

'Subsequently we found that the neutron method could be applied to a wide variety of physico-chemical systems and indeed even in biology. It could be used to study liquids, ionic solutions, polymers and in surface and colloid chemistry.'



Professor White . . . public should be accurately informed.

By the mid-1970s, the use of neutron scattering methods had begun to spread through the sciences and many researchers began to use the method to tackle problems which had not been resolved by more traditional methods.

In 1974 Dr White was invited to become Assistant Director of the Institut Laue-Langevin on secondment from Oxford, and in 1977 he became director, succeeding Nobel prize-winner in physics, Professor Rudolph Mössbauer.

During the late 70s in the Institut there was much scientific excitement and a ferment of ideas as a new period in science was opening up. This period embraced new scientific areas and new technique development — a mix of activity at the Institut which remains, perhaps, the best of its kind in the world.

'My own scientific activity was concerned with seeing how far properties of adsorbed molecules and the nature of interfaces could be probed using a combination of neutron scattering and nuclear magnetic resonance methods. We found the first examples of quantum mechanical tunnelling of adsorbed species, and on the whole the work proved fruitful and opened up a wide range of applications. One of our major interests was the nature of

interfacial phenomena. It still is, and this is an area we will continue to study in Canberra,' he said.

Professor White expects that research conducted under him will continue to make use of the facility at Grenoble.

He also wants to see a powerful local facility using X-rays made available for doing complimentary work, although he says it would be unlikely that a neutron source could be established in Canberra in the near future.

It was hoped to have access to the Lucas Heights reactor, and overseas facilities.

'I think one of the exciting things about coming to Canberra is that the School already has a strong basis in the study of molecular crystals and liquids, but there is scope to add some new areas,' Professor White said.

Work to be done in the School would be concerned with X-ray scattering, with a particular aim of studying interfacial phenomena and low-dimensional phenomena. It has been found that the properties of materials, in the one or two-dimensional forms, can be quite different to their normal three-dimensional properties; for instance, with molecular polymers it is possible to make plastics that conduct electricity. These conducting polymers have other unusual physical properties and

under suitable conditions exhibit battery action. One of Professor White's students is studying this with the object of trying to improve the conventional battery.

'We are concerned particularly with fundamental aspects but we are not blind to commercially interesting spin-offs, and when possible we will exploit them,' he said.

'I think it is essential for us to focus on the highest possible scientific goals but, be ready to pass on anything useful to industry.'

Practical spin-offs from some of the lines of research Professor White is following could have a long gestation period of more than 50 years, but are no less important for that.

Much of the 'pure science' of the 1930s looking into the fundamental nature of matter has led to the present revolution in techniques and equipment used to carry out the study of matter at the atomic level.

Professor White, having spent much of his professional life in the development and refinement of techniques using neutrons, is concerned that the public be accurately and impartially informed of progress and developments in the peaceful nuclear area. The great distinction from non-peaceful ends should be clear, he says.

'I think that in a democracy, the public has a right to choose the way it wants to live; it is essential that the issues be put very clearly.'

'I think that with the question of nuclear materials there is a lot of fear. Not just in Australia but everywhere. It is the duty of people who are concerned with experiments involving nuclear phenomena to be as clear as they can be about what they are doing; about what dangers, if any, there are; or, as is usual, about the lack of dangers.'

For example, present and foreseen uses for neutron beams ranged from radiation therapy to non-destructive metallurgical testing, and these could become indispensable to society. These methods, if introduced, needed to be conducted with respect for public concerns, he said.

'I think it is difficult to go backwards in knowledge; for example the knowledge of nuclear weapons exists and I think the use of such knowledge has to be contained by political constraints. But I also believe that these constraints should allow progress in valuable directions.'

The possibility that Australia might soon have a new neutron-scattering facility, capable of being used for world-class research was, as far as he knew, remote at present, though countries such as the United Kingdom, the USA, and the USSR had such a capacity. There was also talk of some of the developing Asian countries taking an interest in such technology. It might be of value to become associated with one or other such project.

Visitor defends funding for 'pure' research

The contemporary relevance of so-called 'pure' scientific research must be defended by the scientific community against threatened cut-backs in governmental funding, according to Professor Richard West, of Cambridge University.

In a lecture during his recent visit to the ANU, he said that rather than succumb to cut-backs, a balance had to be reached between 'pure' and practical scientific research.

Professor West is head of the Cambridge University Botany Department and Director of the sub-department of Quaternary Research. He is a member of several British science councils.

Speaking from the perspective of his own research, which involves the vegetational and environmental history of north-west Europe over the past two million years to examine the advance and retreat of glacial masses, Professor West said that seemingly obscure scientific work had later proved vital in understanding more immediate environmental problems.

Principles derived from catchment studies in geochemistry had been later adopted to examine the history and causes of contemporary acid rain, he said. Geochemical studies of ocean sediment permitted an understanding of the history of atmospheric carbon dioxide levels and therefore provided grounds for predicting the future effects of carbon dioxide concentrations and the ongoing controversial

problem of the 'greenhouse' effect.

Similarly, the 70-year-old technique of analysing pollen traces trapped in sediment strata was now considered useful in examining the dramatic degradation of Germany's Black Forest and in tracing the general history of vegetation affected by pollution. In this regard, the use of radiocarbon dating techniques had revolutionised the understanding of environmental history.

Counter staff course

The Staff Training and Development Unit will be conducting a one-day program for university counter staff on 3 June. The course will cover areas designed to increase effectiveness

Professor West added that to appreciate the extent of humanity's comparatively recent impact on the natural cycle of climatic change, 'base-line research' of this sort was vital in order to establish proper historical perspective.

The longer time span provided by such 'obscure' research would also oblige politicians to concede that pollution was an international problem requiring international efforts.

in counter duties and will include sessions on interpersonal communications, assertiveness, dealing with difficult clients and telephone techniques. More information from Jeannette Clarke, ext. 4338.

Rare star system detected by astronomers

An extremely rare star system has been discovered by astronomers at the Mt Stromlo and Siding Spring Observatories.

It is one of two examples of systems known as 'cataclysmic variables' which have recently been detected by the ANU scientists. The rarer type contains a highly magnetic white dwarf star which, as it rotates, emits an X-ray beam that reflects off a nearby companion star, providing a lighthouse effect in the distant southern sky.

About 150 cataclysmic variables are known, but only a handful containing a magnetic white dwarf have ever been identified.

The work has been done by Dr Ian Tuohy, a Senior Research Fellow, and PhD student David Buckley. They specialise in the study of X-ray sources, and for their present research obtained initial data from the High Energy Astronomy Observatory (HEAO-1), an X-ray satellite operated by NASA.

In collaboration with astronomers at the Massachusetts Institute of Technology, the ANU researchers have been working on a project to identify the optical counterparts to a large number of X-ray sources detected by the satellite.

An X-ray source indicates an extremely energetic object at very high temperature, of between one and ten million degrees, or particles travelling near the speed of light. A more exact identification needs to be made using optical astronomy, and for this the astronomers used the Anglo-Australian Telescope (AAT) at Siding Spring.

The optical observations enabled them to determine that the X-ray emissions are produced by cataclysmic variables. These are systems containing two stars — a normal star

and a white dwarf, which is a very dense star formed from gravitational collapse of a star similar in mass to the sun.

For more information the astronomers were able to gain priority access to the Exosat X-ray satellite operated by the European Space Agency (ESA). Having identified the systems as cataclysmic variables, they wanted to search for more specific properties using the X-ray emissions.

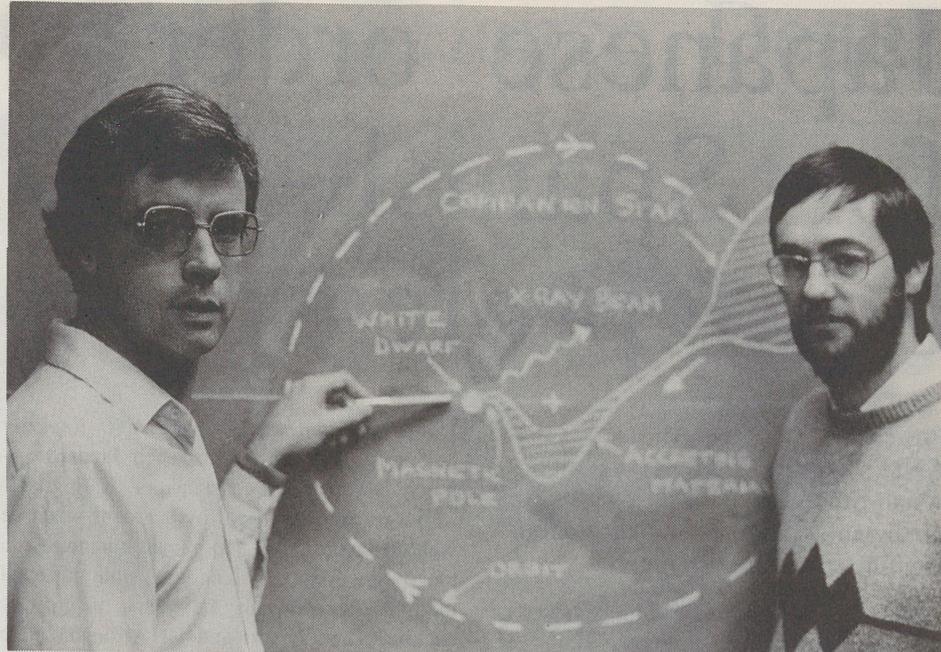
Dr Tuohy travelled to the European Space Operations Centre in Darmstadt, Germany, recently to analyse the data. It showed that one of the systems was giving out a pulsating X-ray beam, which was critical to its identification as a magnetic white dwarf.

'Both the X-ray sources were clearly detected, and the most important result from the observation was the discovery of a strong X-ray modulation of nearly 2000 seconds from one of the cataclysmic variables,' Dr Tuohy said.

'This immediately tells us that we are observing X-ray emissions from a rotating magnetic white dwarf. These are extremely rare.'

A white dwarf in such a system belongs to the DQ Herculis class of stars. The key to their identification is the intense magnetic field. They also have a fairly ordinary star in close orbit, and because of the proximity of the two stars and the strong gravitational field of the white dwarf, atmospheric material is transferred from the ordinary star to the white dwarf.

Also, because of the intense gravitational field, this material flows along the magnetic field lines of the white dwarf and falls on to the magnetic pole nearest the companion star. On impact, huge amounts of energy are released at one spot on the white dwarf and this is seen as an X-ray beam on the star as it rotates. The beam illuminates the companion star and produces optical pulsations, which



Dr Tuohy (left) with student David Buckley and a sketch of the magnetic white dwarf system.

have been detected using the new 2.3-metre telescope at Siding Spring.

The system is too far away to be detected by the human eye, probably in the vicinity of 300 light years. It is in the southern constellation of Columba. The two star systems detected by Dr Tuohy are known at present only by their astronomical co-ordinates, and they will be given names based on their constellation by a group in the USSR which catalogues all variable stars.

More optical observations need to be made before a complete model of the magnetic white dwarf system can be made. For instance, the astronomers still want to find out the orbital period, which is the time it takes the two objects to revolve around a common centre of mass. They expect it will be about five hours.

A full understanding of systems such as this is seen as important, as it can provide further knowledge about the physics of materials and radiation in intense magnetic fields and at high temperatures.

Dr Tuohy presented the results of the work at the European Space Centre workshop on Cataclysmic Variables in West Germany this April. His paper is entitled, 'Optical Observations of New X-ray Emitting Cataclysmic Variables'.

Dr Tuohy told the *Reporter* that these objects, as well as having intense X-ray emission, also had a very intense ultra-violet emission, making them prime candidates to be studied by the Fuse-Lyman Space Telescope being jointly developed by NASA, ESA and Australia.

70 students affected by repetition injury

Seventy students, including both undergraduates and postgraduates, are suffering from Repetition Strain Injury, according to the ANU Health Service.

Dr Judy Leigh, of the Health Service, told the *ANU Reporter* that the problem was not necessarily related to computer technology. It could be caused by stress, overwork or using the wrong pen grip when writing.

'Not enough is known about the injury to say exactly why one person will get it and another won't,' she said. 'However, conscientious students who study extremely hard and are anxious about their work might be more likely to suffer from the condition.'

The University does not have an overall policy concerning students with RSI but instead treats cases on an individual level. A different method of academic assessment may be given to a student with the injury, if an agreement is reached between student and lecturer.

Assessment changes can include oral essays, oral exams, or a mixture of oral and written essays and exams.

Some retrenched workers suffered from RSI before enrolling at the ANU. In a 'Catch-22' situation, these people decided their best hope for getting new jobs was to retrain. Study, however, has proved to be extremely difficult.

Liz Williams, a PhD student in Prehistory, who has had RSI for the past 10 months, described some of the difficulties that students with the condition face.

'They can't take notes in lectures and so must rely on memory for exams. You could

almost call them the lucky ones. In extreme RSI cases, students can't even take notes from books for essential reading on the subject,' she said.

To help with these difficulties, the Communication and Study Skills Unit has set up a course to teach the students new ways to study.

A support group, arranged by the Unit and the Counselling Centre, is also available to help RSI sufferers. Students can discuss their problems and learn how others have coped.

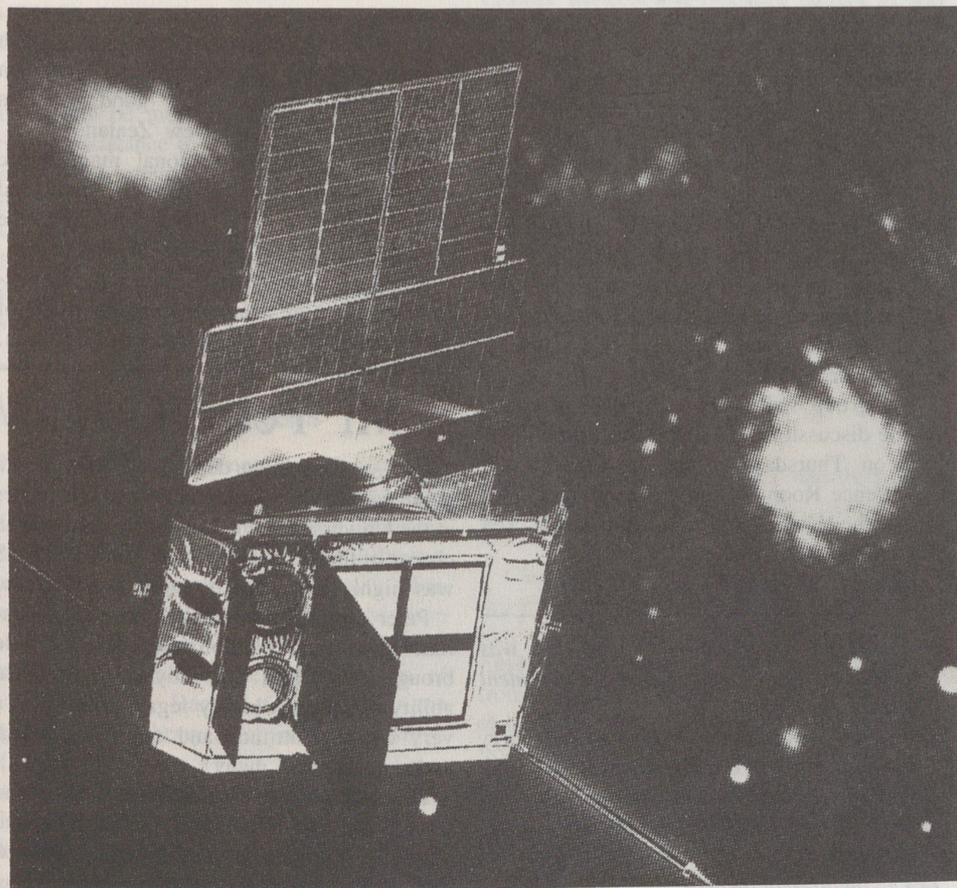
A few practical hints that have been passed on at the support group meetings include:

- Pens and pencils — the fatter the better. Not so much strain is then placed on arm muscles. Don't use ball points, but select free-flowing ink pens.
- Use as much of your arm as possible when writing, rather than restricting movement to the hand and wrist.
- New lycra splints make life easier and are less obtrusive.

- Frozen peas in their packet can be used as an ice-pack to relieve swelling. One RSI sufferer finds this far more beneficial than using sources of heat — but warns that the packet should be clearly marked for the purpose, as the peas should not then be eaten!

A poster campaign, aimed at promoting RSI awareness, will soon be mounted around the campus. The support group also plans to produce a video on RSI — to give support to diagnosed sufferers and to reach a broader audience.

For further information ring either ext. 2442 or 2972.



An artist's impression of the Exosat X-ray telescope in space orbit. The telescope provided the key information for ANU astronomers to detect a highly magnetic white dwarf star in the southern sky.

Japanese order for Spanish-born professor

Professor Anthony Alfonso, of the ANU's Japan Centre, Faculty of Asian Studies, has been awarded one of Japan's most esteemed honours, the Order of the Rising Sun.

The award has been made in recognition of Professor Alfonso's contribution to the development of Japanese language teaching and the introduction of Japanese culture in Australia, and for his services to mutual understanding, friendship and goodwill between Japan and Australia.

An unusual aspect of the award is that neither English nor Japanese is Professor Alfonso's first language. He was born and educated in Spain, and as a young man studied both philosophy and linguistics at the University of Comillas, Madrid, and the University of Michigan, United States. His PhD was awarded by the University of Comillas for his research on the study of the Japanese language.

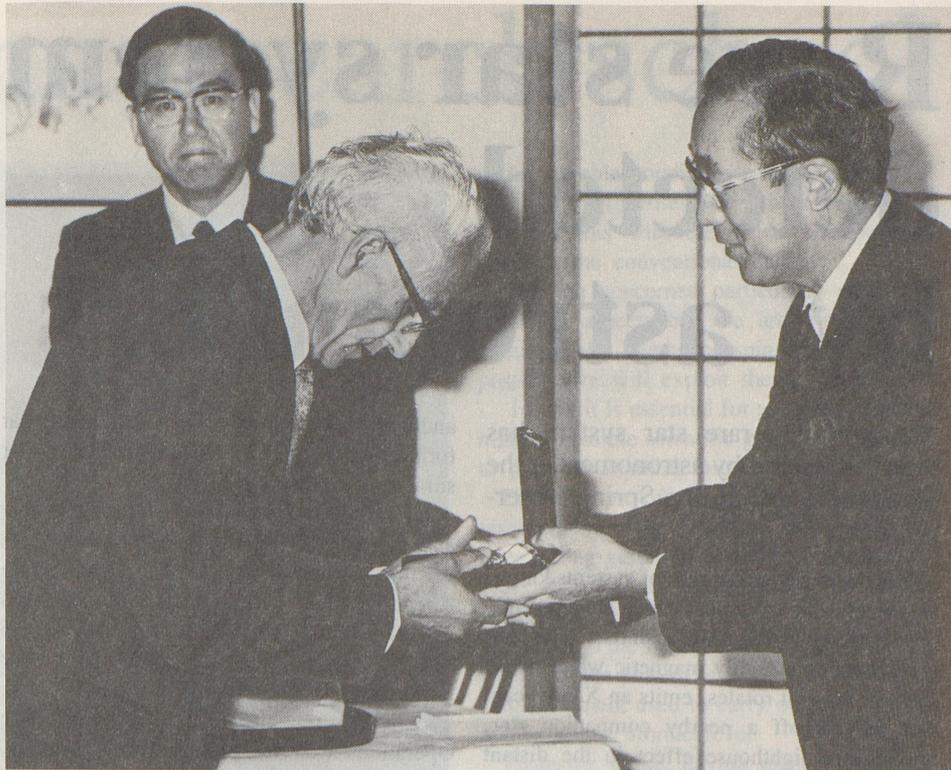
Professor Alfonso told the *ANU Reporter* that he never intended to teach Japanese — much less teach it to speakers of English.

He got into this field by accident when he went to Japan in 1947 to pursue his interest in the philosophy of language and Oriental thought. Those were the years of military occupation in Japan, and Dr Alfonso's help was enlisted in teaching Japanese to foreigners who did not know English. He became interested in the way American servicemen were learning Japanese, and subsequently he went to the United States to study the latest language-teaching methods.

After that he gave up all thought of returning to Spain because 'there was nothing I could do in my own language with Japanese'.

In 1966 he was invited to the ANU as Reader in Japanese, and from 1974 until 1983 he occupied the position of Professor and Head of the Department of Japanese.

Professor Alfonso says he regards it as an



Professor Alfonso (left) receiving the Order of the Rising Sun from the Japanese Ambassador, Mr Toshijiro Nakajima.

asset that neither Japanese nor English is his own language. 'It is very difficult for a native speaker to reflect on his own language because his own language comes so naturally to him,' he explains.

The citation accompanying Professor Alfonso's award mentions his achievements in establishing a methodology for teaching Japanese, the results of which were compiled in his *Japanese Language Patterns*, published in 1966. This work has been highly influential among those involved in teaching Japanese.

The citation also mentions the substantial development of the ANU's Department of Japanese during Professor Alfonso's term as Professor and Head of Department, and the fact that many of his former students can now be found working with trading companies, in

the Public Service, or working for economic exchange with Japan.

Finally, his efforts to promote the teaching of Japanese in secondary schools are cited as having resulted in the completion last year of *Japanese*, a four-volume set of secondary school textbooks.

Familiarly known as 'Alfonso's Japanese', this work is not only used at almost all Australian and New Zealand secondary schools which teach Japanese, but is also required reading for all students of the Japanese language.

Questacon road show



Questacon, the ANU's hands-on science centre, launched a travelling road show recently when 20 of its 100 exhibits were taken to Goulburn. Above, Joseph Grotowski demonstrates some aspects of friction to a young Goulburn audience.



New support group for single parents

A new support group for single parents is starting this term. It will discuss the challenges of parenting combined with work and study, share information that might not be widely known, and possibly investigate areas of need which could be dealt with on campus in a constructive way.

Ms Janis Shaw, of the Counselling Centre, an organiser of the new group, says that most single parents experience feelings of isolation.

'They may also have financial worries and problems in parenting their children without support. If studying at University, and perhaps working as well, the single parent has the additional concerns of meeting deadlines and juggling time more effectively. Sometimes all of these things can pile up and cause a personal crisis.'

The group will meet fortnightly for lunchtime discussions. The next meeting will be held on Thursday 6 June at 1pm in the Conference Room of the Counselling Centre (above the Health Centre on North Road). Tea and coffee is available.

Inquiries to Janis Shaw, ext. 3661.

A women's work effectiveness workshop was held at the Staff Training and Development Centre recently.

The course was designed to help women carry out their work in a more effective way, and it covered communication skills, assertiveness, career goals and setting up support networks.

LEFT: pictured at the workshop are: Back row (from left) Margaret Robertson, Judy Harbottle, Sonia Tidemann, Betty Boyce. Front row: Lyn Crocker, Sylvia Boyce, Lola Rae.

Anzac Fellowships offered for 1986

A number of Australians will have the opportunity to study, conduct research or further their professional experience in New Zealand next year under the Anzac Fellowship Scheme.

The fellowships assist Australians working in such fields as primary and secondary industry, commerce, education, the arts or public service to spend three to 12 months in New Zealand, following an approved program.

One of the major aims of the scheme, which is financed by the New Zealand and Australian Governments, is to foster good relations between Australia and New Zealand.

Benefits include a personal maintenance allowance, an allowance for dependants and the return air fare for the fellow from the airport nearest his/her home to Wellington.

Applications close on 17 July and information brochures are available from the offices of the Commonwealth Department of Education.

Mr Peter Cohn

Peter Cohn's sudden death on 6 May was a great shock to his many friends and colleagues at the University. Peter, senior programmer in charge of the School Computer Unit, RSPHYS was highly respected by staff and students.

Peter came to the School from the Australian Government Publishing Service. He brought with him not only a professional ability which was highly regarded but also a very cheerful attitude and quick wit which endeared him to many.

His friends will especially remember him through his love of the bush, bushwalking and climbing. He actively contributed to the local Rep. and drama group and had a long-standing interest in amateur radio. 'Artevax' was a good demonstration of his clever use of words; he was always appreciative of a good pun.

VE Day brings memories for Science Dean

Celebrations marking the 40th anniversary of the end of World War II in Europe have brought back memories for the ANU's Dean of Science, Dr Dugald Paton.

Forty years ago Dr Paton was flying a Lancaster bomber over Holland — dropping not bombs but food to starving Dutch civilians.

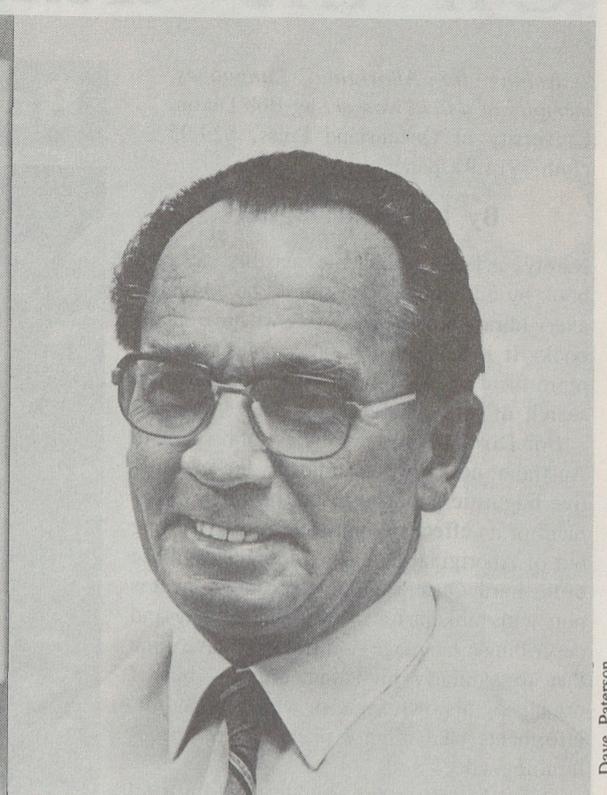
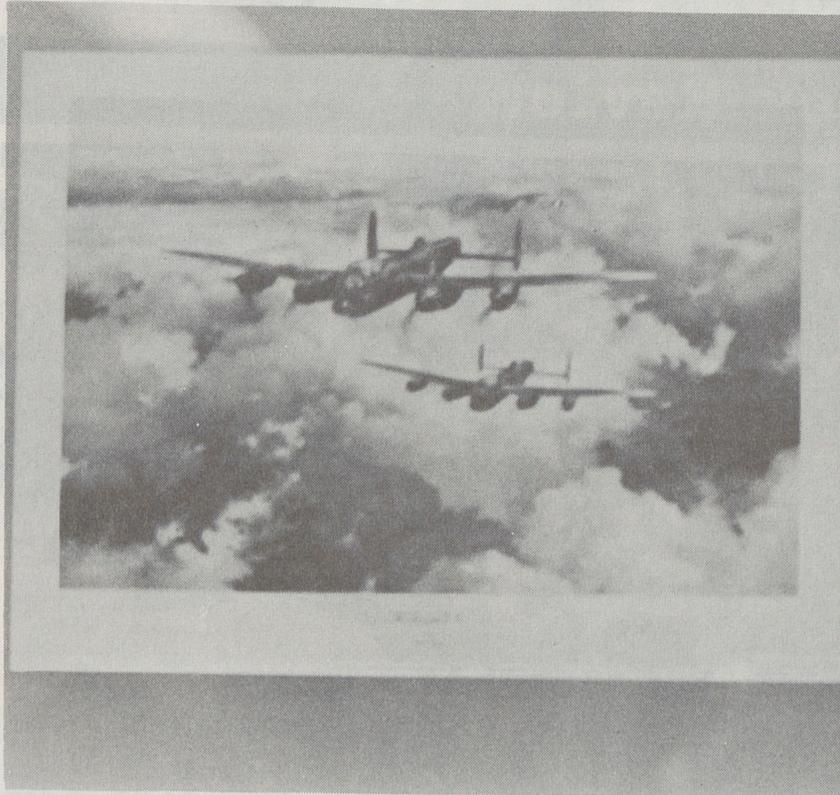
German troops remained in occupation in the Netherlands for several weeks after Germany had surrendered. All food supplies had been cut off to this occupied territory, so the Allies decided to send in supplies by any means possible.

'The Lancaster bombers were filled with tinned vegetables and ham', Dr Paton told the *ANU Reporter*. 'When we flew over the Hague and Rotterdam racecourses and released our "luggage", I was glad. It was a good way to end the war. Those people really needed food, and we gave it to them.'

Dr Paton joined the RAAF in 1942 at the age of 18. After being taught to fly in the now historic Tiger Moth aircraft he was sent to England. By 1944 he was making bombing raids over Germany and occupied Europe.

About the bombing of the cities Dr Paton has no regrets. 'It had to be done,' he said. 'I'm just disappointed that the war we fought might not be the last.'

At the end of the war Dr Paton was eligible for assistance under the Commonwealth Reconstruction Training Scheme, so he enrolled at the University of Tasmania. By 1956 he had completed both his BSc and PhD. For the



Professor Paton with a painting of one of the bombers he piloted during World War II.

next five years he worked as a senior demonstrator and lecturer.

In 1961 Dr Paton moved to Canberra, where he taught science as a Senior Lecturer at the ANU. He was made Reader of Botany in 1968 and became Dean of Science in 1983.

Lining the walls of Dr Paton's office today are five framed prints of bombers he piloted during World War II. In fact, he still pilots light aircraft in order to visit otherwise inaccessible areas for his field research. Together with Emeritus Professor L.D. Pryor,

Dr Paton has been collecting various types of eucalypts from around Australia. His investigations have shown that a chemical from the eucalypts can affect plant growth. The chemical has already been put to practical use in the paddy fields of Japan.

Dave Paterson

Sexual Harassment Panel formed

Nine members of the University community (staff and students) have agreed to be members of the newly-formed Sexual Harassment Panel. They are:

Dr J. Leigh (University Health Service), Mr C.J.H. Thomson (Faculty of Law), Mr N. Adams (Counselling Centre), Mrs M. Evans (Counselling Centre), Ms A. Dargan (Personal Advisor to Staff), Dr M. Dickerson (Dept of Psychology, The Faculties), Dr B. Newell (MSSSO), Ms S. Drakeford (student), Mr J. Shaw (student).

Panel members may be contacted directly, but it may be more convenient for persons seeking assistance to first make a call on the Sexual Harassment telephone line (3595). By doing so they may receive advice on the availability of panel members or other advice that may be of assistance in cases of emergency. At least one other panel member is available via 3595.

AWE office-holders

The Association of Women Employees at the ANU held its annual general meeting on 25 March and elected the following Working Party for 1985: Ruth Belin (Chifley Library), Susan Blee (Academic Appointments), Margot Bremner (Chifley Library), Myriam Bonazzi (Business Manager's Office, RSPacS), Christa Critchley (Department of Botany), Audrey Dargan (Chancery), Katie Egan (Chifley Library), Robyn Maier (RSES), Maureen McInroy (EEO Officer), Erica Roberts (Department of Philosophy), Janis Shaw (Counselling Service), Liz Stephenson (Faculty of Science Office).

The Working Party met on 15 April and elected Christa Critchley as Convenor and Liz Stephenson as Secretary. Enquiries: ext. 2873 (Christa Critchley) or 2809 (Liz Stephenson).

Meeting on Malay history topics

A Colloquium on Malaysian Social and Economic History organised by the Malaysia Society of Australia and the Research School of Pacific Studies will be held in the Coombs Building from 8 to 10 June.

The colloquium will look at Malaysian history over the last 80 years and at particular groups, such as labourers on rubber plantations on small holdings, tin-mine coolies, railway workers and rickshaw pullers. It will also look at the experiences of bosses and entrepreneurs, and at health services.

The aim of the meeting is to draw together scholars who are working on Malaysian economic and social history. There will be 18 speakers, including four from Malaysia and four from other countries outside Australia. Further information from Karen Haines, ext. 3106.

Staff English classes under way again

Classes in English for staff members with English as their second language have recommenced.

Classes for those who wish to improve aspects of English comprehension or expression, but who have a grasp of basic skills in English, will be held on Tuesdays and Fridays from 1 to 3pm. The class for the development of basic English will be held on Wednesdays from 10am to 2pm.

All classes will be held in the IRU Language Laboratories, in the Chifley basement. For further information about enrolling, contact Audrey Dargan, Personal Adviser to Staff, 493616, or Jeanette Clarke, Secretary, Staff Training and Development Officer, 494338.

Vice-Chancellor awarded honorary Law degree

The Vice-Chancellor, Professor Peter Karmel, was awarded an honorary degree of Doctor of Laws by the University of Queensland earlier this month.

The occasion was also Queensland University's 75th anniversary.

In an address to the congregation, Professor Karmel said the last 25 years had seen an explosion in educational opportunities in Australia. Enrolments in all higher education institutions had increased four-and-a-half-fold, while the population had increased by only 50 per cent. Participation in higher education was thus three times as great as it was a mere 25 years ago.

None of the improvements in higher education should give grounds for complacency, however, Professor Karmel continued.

'With the drying up of full-time jobs for teenagers and the need for a better educated, more skilled and more sophisticated workforce, it is not good enough that only 45 per cent of our young people are enrolled in the final year of secondary school, and only something less than one-half of these proceed to higher education.

'Most of our teenagers ought to be in full-time education or in training combining work experience and classroom learning. We still do not approach the levels of education of the United States, Canada or Japan.'

Professor Karmel said public support for education had declined since about 1975, and for almost a decade the environment for education had become increasingly hostile.

'The hostility is to be observed in the publicly expressed attitudes of employers, of politicians and of senior bureaucrats: educational institutions are often blamed for the deficiencies of the economy and for the imperfections of our society. The hostility is

reflected in the media, which almost invariably emphasise failures of our schools and universities and ignore their successes and the problems with which they have to cope.'

Professor Karmel added that people in education must accept that the days of receiving additional resources for the asking were over.

'We must place more emphasis on self-help and on the effective use of the resources we have. We must pay more attention to educational outcomes and the worthwhileness of educational ventures.

'Having said that, our educational institutions should not have to operate in a hostile world. Education is important for Australia. Our schools and universities do important work. They are not perfect but they have much to be proud of.

'Schools and universities have great responsibilities if the economic and social challenges of a post-industrial society are to be met.

'Those of us who work in educational institutions do not have the power immediately to modify unfavourable public attitudes, of which many are ill-founded and irrational, but we can show greater willingness to subject what we are doing to evaluation. We can be more communicative and we can be more responsible to the world around us.'

World congress

A World Congress on Education and Technology is to be held in Vancouver, Canada, from 22 to 25 May 1986 to examine the impact of new technology on education, culture and society. The congress is an initiative of the British Columbia School Trustees Association, from whom further information can be obtained.

On the trail of Aboriginal languages

Searching for Aboriginal Languages: memoirs of a field worker, by Bob Dixon. University of Queensland Press, \$29.95 cloth, \$14.95 paper.

By Lois Carrington*

Rarely, indeed, would one sensibly say of a book by a linguist 'there should be a copy in every library in the land!' Here we have such a book. It is seldom that one comes across a more lucid and delightful guide for those 'in search of' any kind of oral data.

Bob Dixon has made good use of his time in Australia, not only academically and in effective linguistic publishing, but in the development of an effective approach to the ferreting out of Aboriginal languages, especially those of the north Queensland rainforest region. It is not, with him, just a matter of collecting and describing a language — for others have done that to similarly high standards — but of organising his own saga, in which he and his informants take mighty places. It is an enthralling tale.

Dixon has taken the trouble to write it all down, in detail, and for this his own senior students, and others, must be grateful; he explains all the circumstances of his choosing an Australian language to work in, of his coming to Australia in the early 1960s on a prolonged field trip, of the material problems he had with accommodation, cash, vehicles and the rest.

The isolation he felt as a linguist (and here we are given adroit sketches of virtually the only two academic linguists of the day, Arthur Capell and Stephen Wurm) can no longer happen, but the hazards well may, and Dixon's account will be read with sympathy by many another field worker. But, along with the touch of asperity directed at institutions and individuals who thwarted, or were heavy-handed, comes the even good humour of a true raconteur, for the whole book has the maintained excitement of a good adventure story.

It is not, though, primarily for its linguistic content that field workers will consider this a

Book Review



Bob Dixon interviewing Aboriginal people in North Queensland . . . a prodigious ability to recall detail.

vade-mecum: Dixon's published works on Dyirbal, on Yidiny and the other languages are for the linguists. Nonetheless, his account of the unique properties of Mbabaram, or of his surprised encounter with Jalnguy, are here very satisfying.

But, truly, he uses the language almost incidentally to his story, which is a paradox in that the language is the story. The vocabulary items, the occasional sentence, the explanation of points of gender, of ergativity, of tense, of particles, come into the story so smoothly that the eye may glide over them, taking the story from the gloss, or they may be examined with care — it doesn't matter. The point is, I suppose, that the writer takes it for

granted that his reader will have a passing interest in language, and so presents enough to make the validity of the whole quest completely real.

So it is, then, that one may recommend the book widely. It introduces an academic discipline to a potentially wide readership. As a job description, it takes the mystery out of linguistics; senior school students, sociologists, historians, all kinds of people in north Queensland, politicians, and pretty well anybody, should pick up this book and gain immensely in the breadth of their understanding of many a currently disputatious issue.

What keeps one glued to it, however, is not just the account of the succeeding field trips,

the vagaries of the Land Rover, the birth of the firstborn, the catalogue of roads and scenery, the awed delight at the first cane firing. It is the people he meets, his most beloved informants from Chloe Grant, George Watson, Tilly Fuller and the others, to the store-keeping Cowans and Jack Doolan on Palm Island, to the local police, to the station people whom the system obliged to be segregationist.

We are used to meeting informants in books, we know and appreciate how valued they have been; in this book they come up as personalities whom we come to know almost as well as does Dixon himself: they are the heroes of the saga.

Bob Dixon has a prodigious ability to recall detail (he tells us in the last pages that the book was written virtually from memory) of action, of appearance, and of what was said. He 'gets it right' — vide Mrs Cowan's English (p.24) and Chloe Grant's on the same page. As Bob's skill in eliciting develops, we become utterly absorbed in what these informants have to offer, in their own strong desire to let him have every detail of their languages. As Chloe puts it (p.76), the government people in Canberra had given him a hard job 'trying to straighten out all this language' and it was up to her to help as much as she could. We share in the development of intuition in the field, as a result of such help — something more precious even than the reasoned enlightenment which comes long after, back at the desk.

UQP have maintained their high standards of production in this book. Much to be appreciated is the placement of photographs, relating directly to the text; there are very few errors (we did enjoy the peel of laughter). It should stand up to all the handling it will receive in all those libraries!

Perhaps the most memorable tribute comes from yet another distinguished linguist, who read the book and commented ruefully 'That's just the book I wanted to write, when I retire!'

* Lois Carrington is engaged in research and editorial work in the Department of Linguistics, Research School of Pacific Studies.

Olympiam aims to encourage sports participation at ANU

Competing in the 1984 Olympics was the experience of a lifetime for Rene Bol, the ANU's new Sports and Recreation Officer.

Mr Bol was a member of the Canadian water polo team which took tenth place at the Los Angeles Olympic Games. He later came to Australia at the invitation of the ACT Water Polo Association and, within weeks of his arrival, decided to make Canberra his permanent home.

While Rene Bol still retains his interest in water polo (he coaches and plays with the Canberra Dolphins club), his first priority as Sports and Recreation Officer is to promote the Sports Union's facilities. Few students, he says, take advantage of the centre.

'It's a really sad situation,' Mr Bol told the *ANU Reporter*. 'The Sports Union has good equipment and highly-qualified instructors and offers many different courses — yet the

majority of students act as though the place is invisible.'

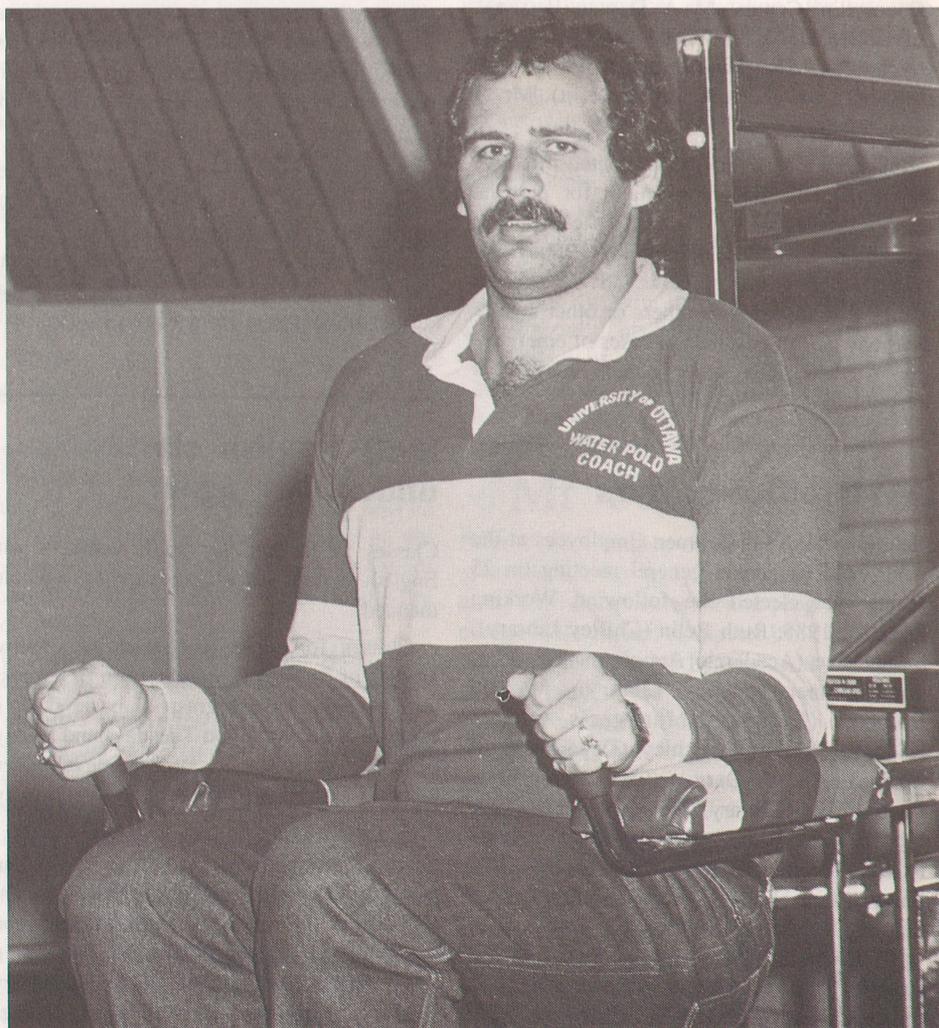
The Sports Union will be offering 23 courses ranging from tennis, aerobics and yoga, to various martial arts. It operates on a non-profit basis and claims its fees are the cheapest in the ACT.

A new wing, which will contain an Olympic weight-lifting room, a 'dojo' (martial arts) room and an aerobics area, will be built by mid-June.

Mr Bol has a background well suited to a University Sports Officer's position. While studying for his BA at Carleton University, Ottawa, he worked as a night and weekend manager at the Carleton Athletics Centre. His own career as an athlete gives him an added insight into the sporting world.

For eight years Mr Bol trained with the Canadian water polo team, taking part in over 200 international games. His goal was to compete in the Olympics, which he did at the age of 26. He regards it as one of the greatest experiences of his life.

It is this enthusiasm for sport which Rene Bol hopes to encourage at the ANU. His message is that while sport can be a serious business, it is also a highly social activity — and one that not only makes you look good, but feel good, too.



Rene Bol . . . 'students act as though this place is invisible'.

Toastmasters Club

The University Toastmasters Club is holding meetings in the IRU Seminar Room, Chifley basement, every second Thursday (pay day) from 12.30 to 1.30pm. Participants should bring their lunch. Inquiries to Audrey Dargan, ext. 3616.

Register planned for development research

The Australian Centre for International Agricultural Research (ACIAR) and the Australian Development Studies Network (ADSN) have combined in a project to compile and publish a register of development-oriented research in Australia.

The coverage will be mainly of research in the social sciences, but research in the physical, earth, medical and engineering sciences which directly addresses development problems will be included. The primary aim of the register is to fill an information vacuum by giving researchers here and overseas an efficient means of finding out what research is being conducted where, and by whom.

As a first step, a questionnaire will be sent out to individuals and departments in Australian universities and other research centres. Postgraduate students engaged in substantial research will also be invited to respond. Results will be stored in a computer database to ensure rapid updating of the register, which will be distributed to respondents and other interested parties on its publication later this year.

A pretest of the questionnaire is presently being conducted among social scientists at the ANU.

ACIAR is a government-funded statutory authority with a mandate to mobilise Australia's special skills for agricultural advancement in developing countries. The ADSN is an information network linking academics and other specialists in development-related disciplines around Australia. The National Centre for Development Studies (formerly the Development Studies Centre) provides the secretarial functions for the ADSN, with Tony Voutas acting as the Network Liaison Officer.

Enquiries should be directed to Ian Coxhead, ext. 3300, or Tony Voutas, 3897.

ANU Reporter

ANU Reporter is published on the second and fourth Friday of each month by University Information (Director Maureen Barnett), 28 Balmain Crescent, Canberra 2601. Editor, Peter Trickett. Staff: Peter Quiddington (journalist), Betty Bohmer (advertising). Printed by Canberra Publishing and Printing Co., Fyshwick.

Intervarsity sports carnival



Scenes from the Intervarsity sports carnival, held at the ANU during the term break. Clockwise (from top left): Melbourne plays Wollongong in a women's soccer match; the ANU team playing Deakin in netball; Melbourne, the eventual winner of the Australian Rules football competition, defeating Sydney; Sydney playing New England in men's soccer.

In the Aussie Rules grand final, Melbourne

coasted to an easy victory over Adelaide. The final scoreline read Melbourne 27-11-174, Adelaide 7-5-47. The ANU team took third place, beating Monash by the almost equally impressive margin of 18-18-126 to 6-6-42.

Three players from the ANU were named in the Australian Universities Aussie Rules side announced at the end of the tournament. They are A. Arnott, R. Smith and M.

Hosging. Arnott was also voted the tournament's best and fairest player.

In the grand final of the netball competition, Wollongong, 36, defeated Melbourne, 21. The men's soccer resulted in a 3-0 defeat of Melbourne by Macquarie, while in the women's soccer final New England beat NSW 1-0.

PHOTOS: Dave Paterson

From p.8

Sunday 2 June

Canberra School of Music, Australian Composers Series II, Larry Sitsky — An anthology of recent piano music, introduced & performed, 12 noon, National Library Foyer.

Monday 3 June

Canberra School of Music, Graduation recital, Anna Riddell — Flute, 8.15pm, Llewellyn Hall.

Tuesday 4 June

Canberra School of Music, Graduation recital, Richard Cherry — Piano, 8.15pm, Llewellyn Hall.

Wednesday 5 June

Canberra School of Music, University of Adelaide, Cello Ensemble, mid-day concert, 12.45pm, High Court of Australia.

Canberra School of Music, Graduation recital, Peter Edward — Violin, 8.15pm, Llewellyn Hall.

Thursday 6 June

Canberra School of Music, Single studies students — Guitar, students of Sadie Bishop, 7pm, LT3, CSM.

Friday 7 June

ANU Union, Concert, Late night show, Milky Bar Kids + Secret 7, 10.30pm, Union bar.

Canberra School of Music, mid-day music in the recital room, bring your lunch & hear students

in Jazz-Piano-Trombone, 12.30pm, Recital rm.

Canberra School of Music, A programme of Russian music, Geoffrey Tozer — recital, 8.15pm, Recital rm.

Sunday 9 June

Canberra School of Music, Guitar Series I, Sydney Guitar Quartet, 4pm, Recital rm.

Wednesday 12 June

Canberra School of Music, Graduation recital, Peter Garran — Flute, 8.15pm, Llewellyn Hall.

Canberra School of Music, Graduation recital, Louise Howden — Bassoon, 1pm, Llewellyn Hall.

Thursday 13 June

Canberra School of Music, Single studies students — Guitar, students of Sadie Bishop, 7pm, LT3, CSM.

Canberra School of Music, Student Concertos II & III, CSM orchestra, Conductor, Leonard Dommett, O.B.E. 8.15pm, Llewellyn Hall.

Friday 14 June

ANU Union, Acrobats, 8pm, The Bridge.

Canberra School of Music, Mid-day music in the recital room, bring your lunch and listen to students on flute, horn, piano & voice, 12.30pm, Recital rm.

Canberra School of Music, Single studies students of Joan Chia, piano & Leonard Dommett, violin concert, 6pm, LT3, CSM.

Saturday 15 June

ANU Union, concert — D-Fex + Support, 8pm, Union Bar.

Wednesday 19 June

Canberra School of Music, Special VII Handel Anthems & Organ Concertos, 8.15pm, Llewellyn Hall.

Meetings

Sixth Australian Family Therapy Conference, Melbourne, 11-14 September 1985, Closing date 1 July 1985, Contact: Sixth Australian Family Conference, ACTS, GPO Box 1929, Canberra ACT 2601, Australia, (062) 498015.

ANU Public Affairs Conference, Religion in Communist Countries, Burgmann College, 4-5 July 1985, Closing date 26 June 1985, Contact: Centre for Continuing Education, Australian National University, GPO Box 4, Canberra ACT 2601, (062) 494409/494556.

Awards

Post-Doctoral Fellowship in Telecommunications, Australian Telecommunications and Electronics Research Board, Closing date 20 September 1985, Contact: Mr D.H. Fraser, x3692.

Details on the following scholarships and awards may be obtained from the Careers and Appointments Service located on the ground floor of the Chancery Annex.

Australian Federation of University Women — Queensland, Freda Bage Fellowship. Closing Date 30 September 1985.

1985 Japan Air Lines Scholarship — to Japan. Applications close 23 August 1985.

Philips International Institute of Technological Studies. Postgraduate Studies 1986. Closing date 6 July 1985.

Massey University. U.G.C. Post-Doctoral Fellowships. Closing date 31 July 1985.

German Academic Exchange Service Scholarships 1986/87. Closing date 28 June 1985.

The Izaak Walton Killam Post-doctoral Fellowship 1986/87. Closing date 15 December 1985.

Details on the following scholarships may be obtained from the Graduate Students Section located on the lower ground floor of the Chancery Annex.

A.M.R.C. Postgraduate Studentships and Study Awards. Applications close 31 July 1985.

Leslie Vacation Scholarships, Australian Cancer Society Inc. Applications close 1 October 1985.

Australian Telecommunications and Electronics Research Board. Postgraduate Scholarship in Telecommunications. Applications close 20 September 1985.

Australian Tobacco Research Foundation. Research Grants. Applications close 30 June 1985.

The Gowrie Scholarship Trust Fund. Research Scholarships — 1986 Awards. Closing date 31 October 1985.

Australian Computer Research Board. Postgraduate Scholarships in Computer Science and Engineering — 1986 Academic Year.

Commonwealth Scholarship and Fellowship Plan — New Zealand Awards from March 1986. Closing date 28 June 1985.

Anzac Fellowships 1986. The fellowships assist Australians working in such fields as primary and secondary industry, commerce, education the arts or public service to spend three to 12 months in New Zealand, following an approved program. Closing date 17 July 1985, Contact: Selection Committee Secretary, Dick Grierson, Department of Education, (062) 897083.

Commonwealth Scholarship and Fellowship Plan. Scholarships for Australians to do postgraduate courses or undertake research in New Zealand from March 1986, Contact: Mr Dick Grierson, Secretary, CSPF Australian Nominations Committee, Department of Education, PO Box 826, Woden ACT 2606, (062) 897083.

St John's College Cambridge — Commonwealth Fellowship, 1986, invites applications from scholars holding academic post for a Commonwealth Fellowship for the year 1986-1987. Applica-

tions should reach the Master, St John's College, Cambridge CB2, ITP not later than 1 October 1985, and should be accompanied by a curriculum vitae and the names of three referees.

Visitors

Professor A.C. Hamilton, Queen's University, Canada, Visiting Fellow, HRC, April — July 1985, interests: English literary Renaissance. Literary Criticism, x2223.

Professor N. Tennant, University of Stirling, Visiting Fellow, Philosophy, RSSS, 1 month, interests: Logic, metaphysics and epistemology, x4121.

Dr J. Bonnemaïson, Orstom, France, Visiting Fellow, Human Geography, RSPacS, 2yrs, interests: Oceania (Vanuatu, Melanesia), Australia, New Zealand Cultural Geography, rural and regional geography, x4610.

Call for papers

Sixth Australian Family Therapy Conference, Melbourne, 11-14 September 1985, Closing date 1 July 1985, Contact: Sixth Australian Family Conference, ACTS, GPO Box 1929, Canberra ACT 2601, Australia, (062) 498015.

Classified

Advertisements are restricted to staff and students of the University and members of Convocation, and to 20 words each. Normally, only one advertisement per person can be accepted for each issue. Typed advertisements should be sent or delivered to ANU Reporter, University Information. The envelope should be marked 'Advertisement'. No advertisements can be accepted over the telephone. The closing date for the next issue is 5pm Wednesday, 5 June, Inquiries, 2229.

For Sale

Mazda, Bongo, van, runs well, reg Jan 1986, \$800; x4268/814377 (ah).

VW, 1300, Beetle, 1968, clean, very reliable, reg \$800 ono; 732381 (bh).

Datsun, 180B, auto, 1974, reg Aug 1985, gd cond, rebuilt transmission, rebuilt engine within warranty, \$2500 ono; Washing machine, twin tub \$100; x4747/823594.

Roofrack, \$15; Tow-bar \$20; both fit HT, Four wheel fit HQ \$14; Campstove 2 burner, kerosene \$15, offers; 812583.

Car radio, am/fm stereo, National, Cassette player, auto reverse, aerial & speakers, ex cond, good quality, \$150 ono; or will separate; 433256/514585 (ah).

Camera, Minolta zoom lens (Tamron) 85-210mm, \$150; Bulk film loader \$20; x2769/3617.

Vacuum cleaner, Volta upright, with attachments, \$150; Lounge, 2 x 2 seater corner, suit family room or holiday house, \$50; x3187/2177, 10-4pm.

Bed, queen size ensemble, \$90; x3187/2177.

Books, first four volumes, Journal of Archaeological Science, \$60 ono; (02) 4873509.

Chair, Jason recliner, good Dralon, button back, very gd cond \$275; Teasmade, Breville, very gd cond, \$45; x2391/497334.

Fridge, 280L, GE, gd cond, \$150 ono; x3495.

Suzuki, 650 Katawa, ex cond, lot of extras, 10 mths reg, \$2,000 ono; x2565.

Town House, Hawker, separate title, 3 br with BIR & rumpus room, two paved, well treed courtyards, \$96,000 ono; 548223.

Baby Fiat, solve campus parking problems, forget petrol price rises, ex cond, \$1500 ono; 547684 (ah).

Toyota Corona, 1976 in ex cond, gd tyres, recent NRMA report, \$2900; 493146/495389 (ah).

Heaters, Wonder Heat slow combustion, Vulcan oil & tank, best offers; x4386/467760.

Cot, wood, large white queen anne style with inner spring mattress & all accessories, \$100; 492090/515609 (ah).

Bike, child's, Speedwell, Aust made, adj seat & training wheels, suits 4-9 year old, blue, as new, \$70, half new price; x3675/3586/513285.

Bike, Men's 10 speed, Repco, 27", lock & key, leather seat, lights, 9 mths new, ex cond, \$240 ono; x3736.

Moke, 1977, green, economical & well maintained, gd tyres & spare, very reliable runabout, want to sell & get Kombi for long trip, \$1100 reg; 493717/493324 (ah).

Vacuum cleaner, GE, gd cond, \$40; 473868.

Bike, women's Roadmaster, 10 speed, plus Bell safety helmet, as new, \$150; x4249/514697 (ah).

Tables, white Sebel, as new, \$80; Wooden dining, \$30; TV pedestal, castors, \$15; Autobridge, \$15; Baby's lambskin \$15; Fisher-price Activity and bath centres, \$10ea; x4231/542201.

Renault 12TL, 12 mths reg, gd body, ex mechanical cond, new tyres, new seat covers, \$1650; price neg; x3463/491798 (ah).

Moke, 1981, Calif, reg Oct 1985, 50,000 km, zip on covers, ex cond, \$2300; x4055/883717.

Caravan, Millard 26' on concrete pad, Van Village, Narooma, annex, stereo tapedeck all equipment, offers; x3717/512495.

House, Turner, 3br, solid brick, stone's throw from University, large garden, well maintained, quiet street, solar water heating, inspection by appointment; 491157/897300.

Mazda, 929 super deluxe, 12/77, ex cond, radio/cassette, low miles, 6 mths reg, NRMA market value \$5,700, price \$4,900; 815002.

Typewriter, Olympia manual, 15" carriage, gd cond, \$60; x4001/815970 (ah).

Heater, Space, electric, I.X.L. 6kw, complete with fan, thermostat, rear duct & grille, \$200 ono; x2433/542688 (ah).

Washing machine, Wilkins Servis twin tub, gd cond, \$70; Space heater, electric, 50HZ, 15 amps, wall mounted, \$40; 487971.

Freezers, steel lined, \$190; Lounge suite, pine, 3 piece \$125; Micro-wave oven, Sharp with browner & carousel \$350; Desk, roll-top (3 y.o.) \$135; 582531 (ah).

Toyota Corolla, orange, 1973, runs well, \$1200 ono; 485849.

Lounge chairs, (2) deck chair, foam dble mattress, ironing board, barbeque, pillow, SS tray, vases, 2 gallon water heater, 3 phase water heater, other items, offers invited, Lyn x2572/956609.

House, Waramanga, solid brick, 3br all with built in cupboards, extra large garage (up to 7 cars), suits home-based business or hobbists; 582531 (ah).

Computer, Kaypro-10, hard-disk, much software, ex cond, \$3,700; Range Rover, 1978, ex cond, 86,000 km, \$12,500; x4759/585515.

Home, 3br, dble brick, on beach front reserve, colonial, 2yrs old, secluded in acre natural bushland, own path to beach, open for inspection 8-10 June, x2784/815331.

House, Flynn, 4br, ensuite, established gardens, cul-de-sac, \$88,500; x4759/585515.

Bike, European 10 speed, man's, \$130; Sewing machine \$100; Computer, Epson HX20 personal, including cassette tape & small printer \$600; all items as new; x2081/541773.

Accommodation Available

Rivett, retired academic, has small f/f house to rent July-Aug 1985, \$100 p.w. Use of car neg, 884460.

Durras Lake, holiday cottage, sleeps 6, all facilities, \$20 a day, \$100 p.w. off season, pref no smoking/pets, T. Keen 318553 after 6pm.

Jindabyne, home, 4br, 2bath, f/f accom 14, every room heated, mod laundry, CTV/Video, high & low season avail, reas rates; x4035/515338.

Accommodation Wanted

House, 3/4br furnished for visiting academic (Qld) & family, mid July-mid Dec 1985, will care for garden; x3653/549605.

Accommodation, near University for visiting academics, approx 14 July-23 August & 7-28 September 1985; x2728.

Wanted

Car exchange, visiting British

academic & family (3 children) would swap 1980 Volvo Estate for similar, July-Dec 1985 approx, M. Dodson, Dept of Earth Sciences, Leeds University, Leeds, LS2, 9JT, U.K. (0532-431751, x6417).

Typist, word processor operator to type PhD theses on disc using Wordstar, 486576.

Trailer, approx 6' x 4', John x2864.

Exchange, free dry cut firewood in exchange for bricklayer-carpenter/handyman to line shed & finish chimney, accommodation, transport & tucker provided; x3717/512495.

Miscellaneous

Students or staff who wish to report a case of sexual harassment or obtain advice and assistance in coping with such a problem should ring x3595 — all calls will be treated on a strictly confidential basis.

Recorder-lessons, available, both beginners & advanced pupils; 494026/822767.

Rubbish removed, \$25 per 2t load, lawns mowed; 473868.

Baby sitter, no age limit, ex care, reas rates, Michele, 480338.

Academic Diary

Diary entries for the next issue close at 5pm on Wednesday 5 June and will for the period Monday 17 June to Friday 5 July inclusive. Please assist us by submitting ALL diary entries on forms available from University Information, x2229.

Monday 27 May

Sociology/Arts sem, A. Greig — Bureaucracy and the transition to socialism, PhD work in progress, 3.45pm-5pm, sem rm 2095, Haydon Allen.

Psychology/The Faculties sem, A. Fordham — Educational research in Canberra schools: Its role and priorities, 3.30pm, sem rm 105, Psychology bldg.

Centre for Research on Federal Financial Relations/Faculty of Economics & Commerce sem, Dr M.G. Asher — Forced saving to finance merit goods: An economic analysis of the central provident fund of Singapore, 12.30-2pm, sem rm 2071, Copland.

Modern European Languages/The Faculties sem, Julie Docker — The idea of the spectator in Goldoni's theatre, 12.30pm, sem rm 1175, Dedman.

Tuesday 28 May

Far Eastern History, RSPacS sem, Dr D. Kelly — Chinese debates on the "Guiding Role" of philosophy over science, 11am, sem rm E, Coombs.

Economics, RSPacS sem, Jim Ryan — Determinants of wages, participation and labour supply in rural South India, 2pm, sem rm B, Coombs.

Political sciences, RSPacS sem, P. Howson — On his diaries, 4pm, sem rm D, Coombs.

Modern European Languages, Germanic Section/Arts Honours Students sem, Margaret Hendy — Grimms Maerchen: Eine Analyse der textlichen Veraenderungen, 11am, sem rm 2143, Dedman.

Demography, RSPacS sem, Mr M. Guruswamy — Activity differentials in a South Indian village, 3.30pm, sem rm A, Coombs.

RACI — Canberra Branch, Professor A.J. Birch — A fifty years contribution to organic chemistry, 5.30pm, sem rm 134, RSC.

Wednesday 29 May

Anthropology, RSPacS sem, H. Morphy — From dull to brilliant: The aesthetics of spiritual power among the Yolngu, 9.30am, Nadel rm, Coombs.

Pacific & Southeast Asian History, RSPacS sem, Twang Peck Yang — Middlemen minority in transformation: Chinese business elites in Indonesia, 1940s & 1950s, 3.45pm, sem rm E, Coombs.

Women's Studies/Arts sem, Professor M. Vicinus — Male space and women's bodies: the English suffragette movement, 11am, Geoffrey Fairbairn rm, Haydon-Allen.

Linguistics/The Faculties sem, Dr J. Guy — Inadequacies of the comparative method as applied to unrecorded (Polynesian) language data, 4pm, sem rm 2135, Dedman.

Economics, RSPacS sem, H.W. Arndt — Market failure, dualism and X-inefficiency, 12.30pm, sem rm B, Coombs.

Thursday 30 May

History, RSPacS sem, Mr B. Knox — The working classes and empire at mid-century, 11am, sem rm D, Coombs.

CRES sem, Professor W.R. Derrick Sewell — When do environmental problems become political issues?, 12.30-2pm, 5th fl, sem rm, Crawford bldg.

International Relations, RSPacS sem, Bob Miller — Eastern Europe: Forty years hard?, 11am, sem rm B, Coombs.

Linguistics, RSPacS sem, Christine Jourdan — TBA, 2pm, sem rm C, Coombs.

Asian Studies Faculty Language Colloquium, Dr K. Ford — Intonation in tone languages, 12noon, sem rm 301, Asian Studies bldg, Bring your lunch, tea & coffee provided, Inquiries 3165.

RSES, Dr S.R. Taylor — Crustal evolution, europium anomalies, non-expanding Earths and other matters, 4pm, sem rm, Jaegar bldg.

Friday 31 May

Political Science/Arts sem, D. Bolton — Corporatism, class and trade unions, 11am, sem rm 1004, Arts III bldg.

History/Arts sem, Professor M. Vicinus — Communities for nineteenth century single women, 3pm, Geoffrey Fairbairn rm, Haydon-Allen.

Economic History, RSPacS sem, Professor N. Butlin — Australian Public Finance 1788-1850, 11am-12.30pm, sem rm E, Coombs.

Philosophy/Faculties sem, Mr G. Atkinson — The theory of meaning: 'p' is true = p, and the semantics of meaning as use, 10am, sem rm 2097, Haydon-Allen.

Monday 3 June

Modern European Languages/The Faculties sem, Mr G. Selleck — Dept of Foreign Affairs language proficiency levels, 12.30pm, sem rm 1175, Dedman.

Sociology/Arts sem, Dr L. Saha and Dr O. Dent — Changes in gender and occupational structure in inner Canberra, 3.45pm-5pm, sem rm 2095, Haydon-Allen.

Counselling Centre, RSI Student Support Group Meeting, 1pm, Group rm, Counselling Centre, all welcome.

Psychology/The Faculties sem, Scott Henderson — The epidemiology of mental disorders in later life, 3.30pm, sem rm 105, Psychology bldg.

Tuesday 4 June

Far Eastern History, RSPacS sem, Mr I. Taylor — Kwan-kwan cry the ospreys: Chinese ornithology from the Shih-ching to the

present, 11am, sem rm E, Coombs.

Modern European Languages, Germanic Section/Arts, Honours students sem, Margrit Davies — Aspects of popular culture in the Cysat Chronicle, 11am, sem rm 2143, Dedman.

Economics, RSPacS sem, L. Castillo — Government interventions and domestic price distortions in Philippine agriculture, 2pm, sem rm B, Coombs.

RSC/Physical & Theoretical Chemistry sem, Mr R. Edberg — Molecular dynamics simulations of alkanes, 11am, sem rm 134, RSC.

Law Faculty, staff sem, Professor W. Twining — Jeremy Bentham on evidence, 1pm, Staff Library, Law School.

Public lecture, 'In the Mirror of Death: Life, Death and the Tibetan Book of the Dead', Ven. Sogyal Rinpoche, 8pm, Link Lect. Theatre, Asian Studies.

Wednesday 5 June

ANU Public Affairs Conference, organised by Centre for Continuing Education, "Finance of Old Age", sponsored by the Centre for Research on Federal Financial Relations and the Government Policy Co-ordination unit, 5-7 June, 9am-5.30pm, University House.

Public Lecture, 'Healing Arts of Tibet', Ven. Sogyal Rinpoche, 1pm, Haydon Allen Tank.

Thursday 6 June

History, RSPacS sem, Dr P. Hemenstall — Getting inside Burgoyne: The art of writing a Bishop's biography, 11am, sem rm D, Coombs.

AFUW Monthly meeting, Dr C. Bell — Australia and international politics, Coffee 7.15pm — meeting 7.45pm, Common Room, University House.

International Relations, RSPacS sem, T.B. Millar — Forty years of the East-West balance, 11am, sem rm B, Coombs.

RSES sem, Dr P.K. Zeitler — Science or voodoo? The diffusion of argon in potassium feldspar and its applications to tectonic stratigraphic, petrologic problems, 4pm, sem rm, Jaeger bldg.

University II Toastmasters Club, fortnightly meeting, new member & visitors welcome, 12.30-1.30pm, Union Knot-holes bar room.

Linguistics, RSPacS sem, M. Ross — Oceanic languages of the Morobe province Papua New Guinea, 2pm, sem rm C, Coombs.

Asian Studies Faculty Language Colloquium, Jiang Xiaoming — The training of simultaneous interpreters in China, 12 noon, sem rm 301, Asian Studies bldg, everybody is welcome, please bring your own lunch, tea & coffee provided, enquiries China Centre, 493112.

Friday 7 June

History/The Faculties sem, Dr E. Fry — Death of an airman: Europe 1943, 3pm, Geoffrey Fairbairn rm, Haydon-Allen.

Political Science/Arts sem, Mr R. Pitty — Class relations and ideological control in the sources of Soviet conduct, 11am, sem rm 1004, Arts III bldg.

Economic History, RSPacS sem, Dr A.M. Siriwardana — An input-output table for Victoria in 1880, 11am-12.30pm, sem rm E, Coombs.

Philosophy/The Faculties sem, Dr R. Campbell — Human being as self-constituting, 10am, sem rm 2097, Haydon-Allen.

Law Faculty staff sem, Dr D. Partlett — New directions in contract; the tort nexus, 1pm, Staff Library, Law School.

Tuesday 11 June

Modern European Languages, Germanic Section/Arts, Honours students sem, Candida Brebner — Genders of loan words in Swedish, 11am, sem rm 2143, Dedman.

Far Eastern History, RSPacS sem, Dr C. Fisher — Taoism in the Chia-ching court (1522-1566) 11am, sem rm E, Coombs.

ANU Club for Women, Coffee morning, Ms P. O'Neill — Sex discrimination commission, 10am-12noon, Molly Huxley rm, University House.

Economics, RSPacS sem, K. Kalirajan — Simultaneous estimation of firm specific technical efficiency and allocative efficiency, 2pm, sem rm B, Coombs.

Wednesday 12 June

RSC/Faculty of Science/CSIRO/Organic Chemistry sem, Professor G. Crippen — The use of distance geometry to deduce the solution conformation of large molecules from incomplete NMR data, 11am, sem rm 134, RSC.

Friday 14 June

Political Science/Arts sem, Mr G. Davis and Ms J. Pemberton — The rhetoric of consensus, 11am, sem rm 1004, Arts III bldg.

Far Eastern History, RSPacS, Public Lecture, Professor Edgar Wickberg, Dr Mary Somers-Heidhues, Professor W.E. Wilcott & Dr Vivienne Wee — The Chinese Overseas Today: A Forum, 8.15pm, Coombs LT.

Monday 17 June

Urban Research Unit sem, Ms S. Faulbaum — Landlord/tenant relations in the private rental sector, 11am, sem rm D, Coombs.

Tuesday 18 June

Economics, RSPacS sem, Wong Kum Poh — Savings and capital formation in Indonesia, 2pm, sem rm B, Coombs.

Thursday 20 June

University House Ladies Drawing Room Luncheon, Mrs G. Ewens — Some aspects of her book "Murray of Yarralumla", 12.30pm, University House Ladies Drawing Room.

University II Toastmasters Club, fortnightly meeting — new members & visitors welcome, 12.30-1.30pm, Union Knot-holes bar room.

Arts and Entertainment

Entries for the next issue close at 5pm on Wednesday 5 June and will be for the period Monday 17 June to Friday 5 July inclusive. Each notice should be typed on a separate sheet of paper. Publication is restricted to events on campus.

Thursday 30 May

ANU Film Group, 7.30pm, Silkwood, 9.50pm, Melvin and Howard, Coombs LT.

ANU Union, concert, Bush n' Jug night, Snowband, 8pm, Union Bar.

Friday 31 May

Canberra School of Music, Students of Cello, Recital, 6pm, LT 4, CSM.

ANU Union, concert, Late nite show, Lighthouse Keepers + Just a Drummer, 10.30pm, Union bar.

Saturday 1 June

ANU Union, concert, The Gadflys + The Falling Joys, 8.30pm, Union bar.