

## Revised site plan to be released soon

The Buildings and Grounds Committee on Friday 17 April discussed with the University Site Planner, Mr R. Simpson, a further presentation of the developing site plan. The plan will be made available for display and discussion within the University once some amendments have been made.

Speaking after last Friday's meeting, the Chairman of the Buildings and Grounds Committee, Mr A.J.R. Yencken, emphasised the flexible nature of the new plan.

Mr Yencken said the revised plan had been drawn up after long consultation both within the University and between the University and the National Capital Development Commission. He said the result represented a further step in the evolution of the site plan.

The emphasis in the planning process had been on minimising commitments that would affect the University's options for the future. 'While some aspects of the plan have to be constant, we must see that it is continually updated,' he said. 'It would be quite wrong to say, "Here is the master plan — full stop". Members of the University should think of it as a framework for long-term planning rather

*The University Site Planner, Mr Roy Simpson (left), the Registrar (Property and Plans), Mr David Dexter (centre) and the Chairman of the Buildings and Grounds Committee, Mr John Yencken, discuss details of a model showing how the University might develop under the revised site plan.*

than as a static plan.'

Mr Yencken said care had been taken to avoid spreading buildings too thinly over the campus. Instead, buildings had been concentrated in areas where contact with people was considered important. While avoiding overcrowding, the Site Planner had sought to provide the right atmosphere for informal communication.

Open space will be retained in the centre of the campus and this will be used to ensure that adequate facilities for outdoor recreation are provided for interested members of the University. Indoor sporting facilities will also be provided for, as well as non-sporting recreational facilities, such as the Performing Arts Centre for which the University recently received a donation of \$100,000 from Australian businessman Mr F. Duval.

Mr Yencken said that at all times the planners had borne in mind that the University buildings and site were meant for people, and future development had to be at a human scale.

As examples, he quoted the fact that architects engaged to design future buildings would be given specific instructions about

making provision in their buildings for the handicapped, and a special study would be made so that footpaths could be laid in the optimum position for use and convenience.

The need to keep options open was one of the reasons why the Committee had not wanted to commit the University to detailed future development. Another reason stemmed from the limits on available funds — an important consideration in the development of the University road system. While the concept of the ring road had not been abandoned, it had been found necessary to introduce a spine road because of the limited amount of money available.

Mr Yencken spoke appreciatively of the cooperation that existed between the University and NCDC in the planning process, and of the effective way in which the Registrar (Property and Plans), Mr D. Dexter, and his staff had worked with Mr Simpson and other advisors in consolidating comments on the earlier site plan and preparing the new submission for the Buildings and Grounds Committee. He also mentioned how members had welcomed wider representation, and in particular student representation, on the committee. □

## Undergraduate enrolments 1970

Preliminary figures show that this year's undergraduate enrolment of 3,865 is 9.4 per cent up on last year's figure of 3,531. All but 4 per cent of undergraduates are enrolled for Bachelor degrees, the remainder being enrolled for non-degree courses. These figures were given in a paper prepared by the University's Statistical Officer, Mr A.L. Hart.

Arts is outstandingly the largest discipline in the University with 1,736 enrolments, followed by Science (including Forestry) with 737 and Economics with 656. Other figures are Law, 299; Arts/Law, 179; Economics/Law, 35; and Oriental Studies, 223. All disciplines showed an increase in total enrolments this year. Arts/Law enrolments were up 45.5 per cent, Economics by 22.8 per cent, Science by 8.2 per cent, Law by 5.4 per cent, Arts by 4.6 per cent, and Oriental Studies by 2.8 per cent.

The percentage increases in the Faculties of Arts and Oriental Studies were less than in previous years, while the 'high growth' disciplines were those of Economics, Science and Arts/Law. The proportion of new students who enrolled in the Faculty of Arts this year was 41.6 per cent, compared with the Faculty's total of 45.2 per cent of all undergraduate students. In Economics on the other hand the proportion of new students was higher than the Faculty's proportion of all enrolments with 18.8 per cent of all new enrolments going into the Faculty, which has 16.4 per cent of all undergraduates. Other comparative figures were: Law, 7.5 per cent of all new enrolments compared with 7.8 per cent of all enrolments; Arts/Law, 6.1 per cent of new enrolments compared with 4.8 per cent of all enrolments; Economics/Law; 1.7 per cent of new enrolments compared with 0.9 per cent of all enrolments; Oriental Studies, 5.1 per cent of new enrolments compared with 5.5 per cent of all enrolments.

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Science has 19.2 per cent of both new and all enrolments.

Part-time undergraduates at 31 March comprised 49.5 per cent of all undergraduate enrolments, compared with 49.8 per cent last year. Part-time students heavily outnumbered full-time students in Arts (1,043 to 693) and Economics (454 to 202). On the other hand, only 2 per cent of Forestry students were part-timers and 10 per cent of Arts/Law students.

The proportion of female undergraduates rose by 2 per cent from the 1969 figure of 28 per cent to 30 per cent of total enrolments.

A quarter of all undergraduates live in a hall of residence or affiliated college. This proportion is similar to that of 1969. □

### Undergraduate scholarships

At its meeting on Friday 10 April Standing Committee of Council resolved that all ANU undergraduate scholarships should have the same emoluments and other benefits. There will be only two categories of emolument obtaining: the 'in hall' category, comprising free accommodation in a hall plus a \$250 p.a. allowance, and the 'elsewhere' category, comprising an allowance of \$880 p.a. There have previously been minor differences between National Undergraduate Scholarships, Oriental Studies Scholarships, Final Honours Year Scholarships and Undergraduate Assistantships.

The same travel assistance will apply to all holders of undergraduate scholarships and, subject to the concurrence of the Halls of Residence Committee, Final Honours Year Scholars and University Assistants will be offered residence during the tenure of their awards.

Standing Committee decided to abolish the special Oriental Studies Scholarships for graduates because there is no longer a need to encourage well-qualified applicants to study in the Faculty of Oriental Studies. However, graduates may still apply for Oriental Studies Scholarships on the same basis as undergraduates.

Other matters dealt with by Standing Committee included the following:

*Conditions of Service.* Following a request from the Association of Architects, Engineers, Surveyors and Draftsmen of Australia, the Registrar was authorised to enter into negotiations with the Association in relation to conditions of service applicable to those grades of University staff which the Association is entitled to represent.

*Ceremonial Officers.* Professor D.P. Scales was appointed to the position of University Marshal and Dr G.B. Barlin to the position of Esquire Bedell.

*Admission to degrees.* Dr K. Serkowski, Senior Research Fellow in Astronomy, was admitted to the degree of Doctor of Science.

The following candidates were admitted to the degree of Doctor of Philosophy: John Robert Christie, Kenneth Le Roy Coop, John Ayliffe Cooper, Colin Patrick Mackerras, Charles Campbell Macknight, Ian Ernest Maxwell, Edward George Schmidt, Jennifer May Shield, Jim Richard Specht, Richard Deane Terrell, Gregory Austin Tannock, Angela Carol Walker, Neil Hale Williams and Michael Willis Young.

Bart John Hesterman was admitted to the degree of Master of Science.

*Grants and gifts.* The World Health Organisation has made a further grant of \$500 to support research by Dr R.G. Webster and Dr W.G. Laver (Microbiology) on avian influenza virus in Australia.

Esso Standard Oil (Australia) Ltd has made a gift of \$1,100 to the University. \$500 of this amount will be used for the advancement of the earth sciences and \$600 to provide a scholarship for a qualified student who may otherwise have financial difficulty in completing his honours year. □

## Study of Canberra shopping centres



A project to ascertain the optimum positions of Canberra shopping areas is being carried out by fourth-year honours students in the Department of Geography (SGS) under the direction of Mr J.M.A. Chappell. The project is designed to provide information about such matters as sales potential in a given area in relation to its distance from the shopping centre, its population density and its social status; and to map 'equipotential' lines — the boundaries between shopping areas where potential sales in the two shopping centres are equal and customers are as likely to choose the one centre as the other.

The main research tool being used by the students is an engineering technique developed by Mr Chappell as a simple mechanical analogue computer for geographical models of this kind. Using small tiles, the students have built models of Canberra in the form of three-dimensional bar graphs to represent population density and social status ratings. The models are immersed in an electrolytic tank, through which an electric current is passed. In his analogue, Mr Chappell is working on the assumption that sales potential falls off as distance increases in a manner analogous with voltage fall-off along an electrical resistance. When the movable electrodes are placed in the tank, one in a position representing a particular shopping centre, 'sales potential' can be measured at any other point on the model of Canberra. Conductivity is directly proportional to depth, so the higher the tiles of the model, the greater the resistance to sales. Tile height represents population density or social status, which thus modify effects of distance.

Students have obtained information about Canberra shopping centres — numbers and types

of shops — and from this have estimated the quantity of commodities flowing through the shops to the consumers in the sales area. One of the problems the model should help to answer is: are shopping areas of the necessary size, and are they positioned in optimum areas? Sales areas are delineated by the 'equipotential' lines, which are being mapped with the help of the model.

Stressing the mainly pedagogic purpose of his model, Mr Chappell said, 'The model is a great simplification of what actually happens in retailing and consumer behaviour. In reality there are many factors involved in determining what makes a consumer go to one shopping centre rather than another. Some of the factors we have ignored are, for instance, the search for "best" places for particular commodities; and the fact that large shopping centres have specialised functions, attracting customers for a particular commodity, and that the customer tends to do the weekly shopping there at the same time. Because of the need for simplicity in a student project, we have concentrated on just a few obviously important factors in retailing patterns.'

Nevertheless, the technique can in principle be extended to deal with more complex data, and Mr Chappell intends to follow up the current project with further studies of his own. He believes that the technique can be useful in similar studies by professional geographers to provide information for town planners.

*In the photograph, Mr J.M.A. Chappell (left), with honours students, constructs one of the models being used in the study of marketing patterns in Canberra.* □

## Aid to study of sedimentary processes

The study of sedimentary processes by members of the University and CSIRO will be made easier by an ungainly looking but practical piece of equipment installed in extensions to the Geology Building. The equipment is a flume, or glass-walled channel 30 feet long, 3 feet wide and 3 feet deep, capable of being tilted from the horizontal to 2½ degrees. However, wedges can be inserted in small sections of the flume to produce slope angles of much greater magnitude. The flume, built to the design of members of the CSIRO Division of Soils and the Department of Geology, was constructed under the direction of Mr E.W. Simmonds, the University's Chief Engineer, in the workshop of the Research School of Physical Sciences.

The Chairman of CSIRO, Sir Frederick White, inaugurated the operation of the \$15,000 worth of equipment on Wednesday 22 April at a function held to mark the completion of the Geology Building extensions.

The flume will be used mainly for investigations into the formation and erosion of sediments by water currents of various rates and volumes. Beneath the flume is a trough running almost the entire length of the laboratory. When the flume is in use the trough serves as a sediment trap, as well as allowing the measurement of discharge over a V-notch weir. However, when the flume is moved to one side the trough can be used for the study of such phenomena as erosion on slopes, the effects of waves and currents, and the development of river meanders.

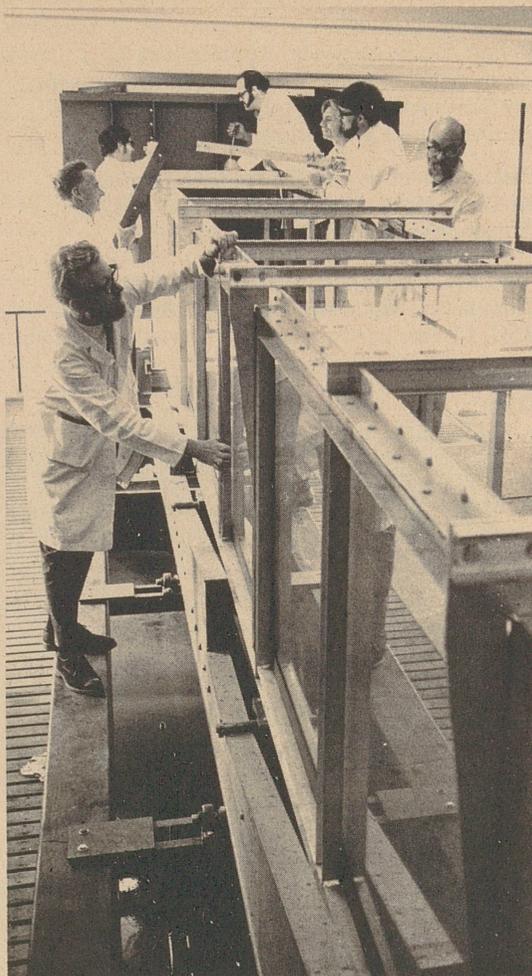
The flume uses a recirculating water supply drawn from a large underground tank. Water is pumped from this tank to the head tank of the flume. When discharged from the flume the water runs back along the trough beneath, over the V-notch weir and then gravitationally into the underground tank.

The extensions to the Geology Building were completed in December 1968 but a function to mark the fact was delayed until the flume was ready for use. The extensions, built at a cost of \$500,000, are occupied by staff and research students attached to the Department of Geology. They also temporarily accommodate a research group of staff from the Department of Chemistry.

At Wednesday's function the 250 guests were able to see a wide variety of displays specifically mounted for the occasion. These included a display of historic books on Geology, including a first edition copy of a 16th Century work, *De Natura Fossilium*, which is considered to be the first scientific textbook on minerals, so marking the beginning of Geology as a science.

Other displays included geological maps made by students during field excursions, equipment similar to that used for the making of detailed trace-element analyses of Apollo XI samples from the moon, laser beam apparatus, displays of fossil fish some 350 million years old, photographs and maps of the moon and Mars, and a display showing a record of Man's evolution.

These displays will be mounted again on Wednesday 6 May for Canberra secondary school students and members of the public visiting the Department. Professor Brown said this week that the Department would be open from 2.30 pm.—6 pm. that day to enable those interested to see the displays and, if they so desired, to talk with members of staff about the study of Geology and the prospects of Geology as a career.



Members of the Department of Geology put finishing touches to the flume in readiness for the inauguration of the equipment.

### Conferences on environmental crisis

Problems concerning what has been described as 'the environmental crisis' are to be discussed at a series of conferences sponsored by the Australian Academy of Science and its National Committee for the International Biological Programme (IBP). Members of the ANU and other universities, scientists and technologists from government bodies, educationists and representatives from industry will gather from all parts of Australia and overseas for the meetings which began this morning (Friday) and continue until Tuesday evening in the Academy of Science.

The proceedings began with a meeting of the Council of the Australian Conservation Foundation, which was addressed by the Duke of Edinburgh. It was followed this afternoon by the opening of one of the two main events, a conference on 'Education and the Environmental Crisis' chaired by Sir Otto Frankel, Chairman of the National Committee for the IBP, and organised by Dr S.V. Boyden and Dr J.J.T. Evans (both of the Urban Biology Group). The sessions conclude with a symposium on Monday and Tuesday entitled 'Ecology, Technology and Resource Management' organised by the Ecological Society of Australia (President, Professor R.O. Slatyer, RSBS).

The conference on 'Education and Environmental Crisis' will have two main purposes: first, to consider the role and responsibilities of educationists in relation to the environmental crisis; second, to examine to what extent educationists have responded by introducing programs to increase awareness of the environmental situation and to stimulate thinking in the community about ways and means of overcoming the crisis. Papers will be given by Professor William Stapp, Department of Resource Planning and Conservation in the University of Michigan, and by Dr Boyden and Mrs Beverley O'Neill, ANU, Dr Earle Hackett, Institute of Medical and Veterinary Science, Adelaide, Dr Jan Mercer, Macquarie University,

and Mr John Bennetts, *The Canberra Times*. On Sunday the conference will form four working groups to examine specific topics and to develop recommendations for the guidance of Australian education authorities.

Discussing the conference, which he emphasised is 'strictly an enquiry', Dr Boyden said, 'There is a body of well-qualified and informed opinion which believes that mankind faces a most serious threat — more serious than the threat of war — as a result of the ever-increasing rate of artificially induced changes in the biosphere. The seriousness of the threat lies in the fact that mankind's existence depends on the essential characteristics of the biosphere.'

'The changes occurring in the total environment of Man are a consequence both of the rapid population increase and the even more explosive growth of industry and technology. These problems manifest themselves in increasing "chemicalisation" of the environment, through accumulation in the atmosphere, soil and water of the products of industry, and other changes in the biosphere such as the replacement of areas of natural vegetation by spreading urban industry and areas of erosion. There are limits to the numbers of people that the world can support and to the extent to which the biosphere can be damaged before it is beyond recovery.'

In his paper 'Environmental Change: perspectives and responsibilities', Dr Boyden will discuss the role of the schools, colleges and universities in dealing with the problems at an educational level. 'As far as the tertiary institutions are concerned,' he says, 'it is my opinion that they are in large part responsible for the deficiencies in education at the primary and secondary level in Australia. Moreover, they fail themselves to turn out graduates who have a comprehensive and balanced knowledge of mankind, past and present, against the global background. The universities have not only allowed the development of the so-called "two cultures" — that is, the separate development of the intellectual disciplines concerned with the processes of human culture on the one hand and those concerned with the processes of nature on the other — but they have actually encouraged the perpetuation of this deceptive and damaging dichotomy. It is essential that we appreciate that the future survival and well-being of mankind depend entirely on our proper understanding of the principles that govern the interplay between these two sets of purposes.'

To remedy this situation Dr Boyden suggests the introduction of full degree courses which relate to the 'science of Man' and link together human biology (evolution, ecology, genetics, epidemiology, etc.), behavioural science, pre-history, sociology and economics. The aim of these courses would be to produce graduates who have a comprehensive grasp of the knowledge that has been acquired in these various disciplines as it contributes to the understanding of the contemporary human situation in scientific terms.

In the ecology symposium on Monday and Tuesday emphasis will be on the natural environment in relation to resource management. The symposium will bring together policy-makers, users and biologists concerned with the overall problems of resource utilisation.

### Visit of Mr Trudeau

The Canadian Prime Minister, Mr Pierre Trudeau, will take part in a question and answer session during his visit to the University on Monday 18 May. The session will be held in the H.C. Coombs Lecture Theatre at 3.30 pm. Although this will be vacation time, Mr Trudeau hopes to take this opportunity to meet with students, including research students. Other members of the University will also be welcome.

## Diary of Events

### Monday 27 April

*History of Ideas Seminar:* Professor K. A. Wittfogel, 'Recent Developments in the Theory of Hydraulic Society'. Seminar Room 4, Coombs Building, 10.45 am.

*Computer Centre Course:* Dr M.R. Osborne, 'Numerical Considerations in the Approximation of Functions', Room 105, Mathematical Sciences Building, 11 am. Also on Wednesday and Friday.

*Statistics (RSSS) Lecture:* 'Statistics for Social Scientists'. Seminar Room 3, Coombs Building, 11 am.

*Accounting and Public Finance Seminar:* Mr M. Van Gelder, 'Program Budgeting in a Military Establishment'. Room 115, Copland Building, 4 pm.

*Ecological Society of Australia Symposium:* 'Ecology, Technology and Resource Management'. Academy of Science, 27-28 April.

### Tuesday 28 April

*Philosophy (RSSS) Seminar:* Mr R.A. Naulty, 'Cardinal Newman's Criticism of Locke's Ethics of Belief'. Seminar Room 4, Coombs Building, 10 am.

*Computer Centre Course:* Dr D.E. Lawrence, 'Elementary Digital Circuit Design'. Room 5, Mathematical Sciences Building, 11 am. Also on Thursday in Room 105.

*Theoretical and Physical Chemistry Seminar:* Dr G. Fischer, 'NSF - The Excited States'. Room 57, RSC, 11 am.

*Theoretical Physics (IAS) Lecture:* Dr B.G. Kenny, 'Introduction to Feynman Diagrams'. Seminar Room 105, Mathematical Sciences Building, 4 pm.

*Continuing Education Lecture on JCSMR:* Professor D.R. Curtis (Physiology), 'Drugs and the Nervous System'. Haydon-Allen Lecture Theatre, 8 pm.

*ANU Film Group:* Hitchcock season (I). *North By Northwest* (Cary Grant, James Mason and Eva Marie Saint) and *Moving Statics* (by Arthur Cantrill). Coombs Lecture Theatre, 8 pm.

### Wednesday 29 April

*Interdisciplinary Seminar on Cross-Cultural Research:* Dr S. Bochner (Psychology, University of NSW), 'Ethnic Identity and Racial Prejudice: Research in progress'. Room 206, Department of Psychology, Physics Building, 12.30 pm.

*Canberra Hospital Seminar:* Mrs Rigby, Mr Jones and Dr Green, 'How Should Doctors Manage Mentally Retarded Children?' Canberra Hospital, 12.30 pm.

*Bicentenary Day Lecture:* Professor Manning Clark on Captain James Cook. Arranged by the ANU Historical Society. Coombs Lecture Theatre, 1 pm.

*Forestry Seminar:* Dr M. Tanton, 'Some Impressions of Forest Research and the Role of Forest Zoology in the U.S.A.'. Room 103, Forestry Building, 1 pm.

*ANU Revue: Whatever Happened to Hieronymous Bosch?* Childers St Hall until 2 May. 8 pm. Also on 6-9 May. Bookings (\$1.50) at Travel Post, Monaro Mall, and Bouchiers, Kingston. Student concession (\$1) at Union Shop only.

*University Lectures 1970:* Professor P.H. Partridge, 'Contemporary Revolutionary Ideas'. Coombs Lecture Theatre, 8.15 pm.

### Thursday 30 April

*Mental Health Seminar:* Applications for a place in this seminar, to be held in the University 22-24 May, close today with the Centre for Continuing Education.

*Philosophy (SGS) Staff- Student Seminar:* Mr Denis Oram, 'Performances and Activities'. Philosophy Seminar Room, 10 am.

*Inorganic Chemistry Seminar:* Mr K. Bentley, 'Enzymes - Metal Ion Catalysis'. Room 134, RSC, 11 am.

*Pluralist Society:* Mr K. Lycos (Philosophy, SGS), 'Is War Bad?'. Lecture Room 1, Haydon-Allen Building, 1 pm.

*Medical Chemistry Seminar:* Professor W.A.E. McBryde, 'Spectrophotometric Methods for the Study of Equilibrium in Solution'. Florey Theatre, 3.45 pm.

*Geophysics and Geochemistry Lecture:* Dr F.J. Vine (Geological and Geophysical Sciences, Princeton), 'Aspects of Sea-Floor Spreading'. Geophysics Seminar Room, 4 pm.

*Theoretical Physics Seminar:* Mr Naresh Kumar, 'Shell Model Calculations for Nuclei in the 1p-Shell'. Seminar Room 105, Mathematical Sciences Building, 4 pm.

*Academy of Science Lecture:* Dr W.T. Stearn (British Museum of Natural History), 'Sir Joseph Banks and Australasian Botany'. Becker Hall, Academy of Science, 5 pm.

*Lecture in German:* Hans Bender (German writer), 'Literarisches Leben in der Bundesrepublik'. German Reading Room, upstairs Bailey Arcade, 8.15 pm.

*Public Lecture:* Sir Joseph Hutchinson (Drapers Professor of Agriculture, Cambridge), 'A Strategy for World Agriculture'. Forestry Lecture Theatre, 8.15 pm.

### Friday 1 May

*Symposium on Marine Sciences in Australia:* Arranged by the Australian Academy of Science. Becker Hall, Academy of Science, 9.30 am.

*International Relations Seminar:* Miss Kyoko Tanaka, 'The Rural Situation in North China 1937-45 and the Policies of the Chinese Communist Party towards the Peasantry'. Seminar Room 2, Coombs Building, 11 am.

*Lecture in German:* Hans Bender (German writer), 'Von der Story zum Text'. Room 5, Haydon-Allen Building, 12 noon.

*Urban Research Unit Seminar:* Mr M. Painter, 'A Comparative Analysis of the Policy-making Process in Five Local Councils in Sydney: Thesis proposal'. Seminar Room 4, Coombs Building, 2 pm.

*World University Service Ball:* Featuring a big band, 'lights', free wine and supper. Announcement of the 'Miss Uni' Quest winner. Union Building, 8 pm. Tickets from the SRC Office, \$8 double.

*German Film Program: Variety (1925).* Arranged by the Department of German. Language Laboratory, 8 pm.

### Saturday 2 May

*Rugby Union:* ANU v Queanbeyan, North Oval.

### Sunday 3 May

*ANU Film Group:* Hitchcock season (II), *Foreign Correspondent* and *Torn Curtain* (Paul Newman and Julie Andrews). Coombs Lecture Theatre, 2 pm.

### Monday 4 May

*History of Ideas Seminar:* Dr R.J. Banks, 'Ludwig Feuerbach: Still "A Thorn in the Flesh of Modern Theology"?' Seminar Room 4, Coombs Building, 10.45 am.

*Computer Centre Course:* Dr M.R. Osborne, 'Numerical Considerations in the

Approximation of Functions'. Room 105, Mathematical Sciences Building, 11 am. Also Wednesday and Friday.

*Statistics (RSSS) Lecture:* 'Statistics for Social Scientists'. Seminar Room 3, Coombs Building, 11 am.

*Accounting and Public Finance Seminar:* Mr J.Y. Henderson, 'Problems of Valuation for National Balance Sheets'. Room 115, Copland Building, 4 pm.

### Tuesday 5 May

*Philosophy (RSSS) Seminar:* Dr P.J. Sheehan, 'Meaning and the Analytic Synthetic Distinction'. Seminar Room 4, Coombs Building, 10 am.

*Lecture in German:* Hans Bender (German writer), 'Vorlesung aus eigenen Werken'. German Departmental Centre, Room 213, Second Arts Building, 10 am.

*Computer Centre Course:* Dr D.E. Lawrence, 'Elementary Digital Circuit Design'. Room 5, Mathematical Sciences Building, 11 am. Also on Thursday in Room 105.

*Lecture in German:* Hans Bender (German writer), 'Über politische Gedichte'. Room 4, Haydon-Allen Building, 4 pm.

*Geophysics and Geochemistry Lecture:* Dr F.J. Vine (Geological and Geophysical Sciences, Princeton), 'Palaeomagnetic Studies in the Ocean Basins'. Geophysics Seminar Room, 4 pm.

*Theoretical Physics (IAS) Lecture:* Dr B.G. Kenny, 'Introduction to Feynman Diagrams'. Seminar Room 105, Mathematical Sciences Building, 4 pm.

*Continuing Education Lecture on JCSMR:* Dr D.D. Perrin (Medical Chemistry), 'Metal Ions in Biological Systems'. Haydon-Allen Lecture Theatre, 8 pm.

*ANU Film Group: Lolita* by Stanley Kubrick, starring Sue Lyon, Peter Sellers, James Mason and Shelley Winters. *The Do-It-Yourself Cartoon Kit* and *The Rise And Fall Of Emily Sprod* by Bob Godfrey. Coombs Lecture Theatre, 8 pm.

### Wednesday 6 May

*Organic Chemistry Colloquium:* Mr J. Avraamides, 'Elimination Reactions in Dipolar Aprotic Solvents'. Room 134, RSC, 11 am.

*Canberra Hospital Seminar:* Dr Ralph Reader (Director, National Heart Foundation) and Professor Malcolm Whyte (Clinical Science), 'Medical Controversy - Is Prevention of Heart Attacks a Waste of Time and Effort?' Canberra Hospital, 12.30 pm.

*Interdisciplinary Seminar on Cross-Cultural Research:* Dr M. Saville (Psychology), 'Risk-taking, Japanese v. Hawaiian'. Room 206, Department of Psychology, Physics Building, 12.30 pm.

*Forestry Seminar:* Dr M. Tanton, 'The Preparation of Graphic Material for Lectures and Papers'. Room 103, Forestry Building, 1 pm.

*Physical Biochemistry Seminar:* Professor A.G. Ogston, 'Molecular Exclusion'. Seminar Room, Level 2, JCSMR, 4 pm.

*JCSMR Lecture:* Dr K.J. Lafferty (Experimental Pathology), 'Recognition of Foreign Material by the Immune System'. Florey Theatre, 4 pm.

### Thursday 7 May

*Inorganic Chemistry Seminar:* Dr I.B. Tomkins, 'Preparation and Structures of Volatile Transition-metal Oxide Halides'. Room 134, RSC, 11 am.

*Pluralist Society:* Panel discussion on Vietnam moratorium. Lecture Room 1, Haydon-Allen Building, 1 pm.

*Geophysics and Geochemistry Lecture:* Dr F.J. Vine (Geological and Geophysical Sciences, Princeton), 'The Age of the Ocean Basins'. Geophysics Seminar Room, 2 pm.

**Far Eastern History Seminar:** Mr Colin Jeffcott, 'Police and Judicial Administration under the Sung'. Room 11, Oriental Studies Building, 2 pm.

**ANU/CSIRO Joint Computing Seminar:** Mr I. Nicholls (Information Electronics), 'A Message Switching System'. CSIRO Division of Computing Research, Black Mountain, 2 pm.

**Conferring of Degrees:** Canberra Theatre, 2.15 pm.

**Medical Chemistry Seminar:** Dr T.J. Batterham, 'Marine Toxins'. Florey Theatre, 3.45 pm.

**Geophysics and Geochemistry Seminar:** Dr F.J. Vine (Geological and Geophysical Sciences, Princeton), 'The Troodos Massif: Cyprus as a fragment of deep ocean floor'. Geophysics Seminar Room, 4 pm.

**Australian Computer Society (Canberra Branch) Meeting:** Mr P.R. Masters (P.A. Management Consultants, Melbourne), 'Feasibility is Not Enough'. Florey Theatre, 7.45 pm.

### Friday 8 May

**International Relations Seminar:** Miss Robyn Abell, 'The Presentation of the Philippines' Claim to Sabah 1962: Methods and motives'. Seminar Room 2, Coombs Building, 11 am.

**Conferring of Degrees:** Canberra Theatre, 2.15 pm.

### Saturday 9 May

**Rugby Union:** ANU v. Norths, Northbourne Oval. □

### Literary journal plans

The ANU literary journal *Prometheus*, which has appeared spasmodically since its first publication in the 1930s, will appear again this year. At the request of the SRC, the Literature Society and the Poetry Society have undertaken to produce the journal under the general editorship of Gerry Windsor (Arts III). Mr Windsor has said he will make *Prometheus* a specifically literary journal and he is anxious to receive suitable articles or essays, as well as poems and short stories.

Contributions for the 1970 *Prometheus*, due out at the beginning of Third Term, are sought from all members of the University — undergraduate and postgraduate students and members of staff. Contributions should be submitted by 8 May (the last day of First Term) and may be left with the *Woroni* office (Union Building), the secretary of the English Department, Mr Windsor (Bruce Hall S4), Miss Virginia Wilton (Burton Hall 317), Miss Sue Lever (Garran Hall 29), Miss Penny Chapman (Ursula College, B245). □

### Notes from departments

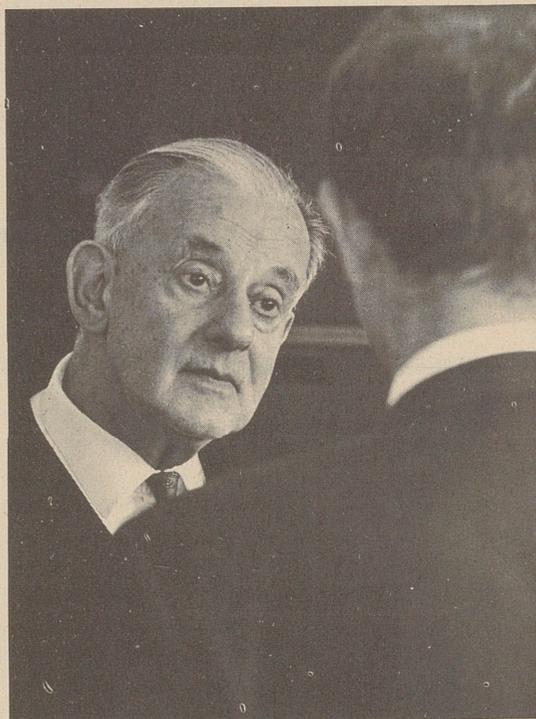
**Demography:** Mr D.J. van de Kaa visited Darwin at the invitation of the Welfare Branch of the Northern Territory Administration from 6–11 April to lecture on demographic analysis during a demography course organised by the Welfare Branch for its research staff and selected field personnel. While in Darwin Mr van de Kaa also addressed the annual meeting of the Graduates Association of the Northern Territory.

**French:** Mr J.A. Grieve visited Melbourne on 15 and 16 April to give guest lectures by invitation to first year students in the Department of French, Monash University. Mr Grieve spoke on the work of the author André Gide.

**JCSMR:** Representing the Royal Society of London, Professor Fenner delivered the opening address at the Royal Society of Queensland/University of Queensland Cook Bi-centenary Symposium held in Brisbane on 18 April. Professor Fenner spoke on Cook's contribution to

the control of scurvy. Subsequently he visited Townsville and Cooktown before returning to Canberra.

**University Library:** The last *Reporter* referred to the Librarian's proposal to develop his post-graduate thesis on 'Anti-Semitism in the Greco-Roman Diaspora' while he is abroad on ten months' study leave. Mr Graneeck will develop his thesis into a study of Jewish communities outside Judea in the 1st Century B.C. and 1st Century A.D., using evidence derived from Dead Sea scroll discoveries and investigations, with special reference to the relationships of these communities with their pagan neighbours and emergent Christian groups.



**Oriental Studies:** Emeritus Professor Walter Simon, one of Europe's leading Sinologists, is giving seminars in the Department of Chinese and the Department of South Asian and Buddhist Studies while on a two-week visit to the University. Professor Simon is pictured above at a reception held on Friday 17 April to welcome him and his wife to the University.

**Physiology:** At the invitation of the AMA (NSW) Section of Neurology, Neurosurgery and Psychiatry, Professor Bishop gave the opening paper at a two-day symposium on cerebral localisation held at the Royal North Shore Hospital, Sydney, on 4–5 April.

Professor Bishop has accepted the invitation of the American Physiological Society to join the Editorial Board of the *Journal of Neurophysiology* as the one member from outside the United States.

### Notices

**Commonwealth Scholarship and Fellowship Plan — New Zealand.** Awards under this scheme are available to graduates, preferably between the ages of 22–28, for study in New Zealand for a period of one to two years from the beginning of the 1971 academic year. The scholarships, available for study in any field, are valued at NZ\$150 for a month, plus allowances.

**Malaysia.** These scholarships are available for study in the University of Malaya, Kuala Lumpur, from the beginning of the 1971 academic year in the fields of arts, science, medicine, agriculture, engineering, education, economics and administration. They are normally tenable for two years and are worth M\$6,000 a year, plus allowances. Scholars should be graduates between the ages of 22–28.

**Sierre Leone.** These scholarships are tenable at Fourah Bay College (University of Sierra Leone) in the fields of education, African studies, geography, geology, botany, English, zoology and possibly engineering, for a period

of one academic year or twelve months as appropriate. They are valued at stg£480 a year, plus allowances. Applicants should be graduates under the age of 35.

Notes on these awards, and application forms are available from Room 38, Chancelry 2A, and returned to that address (addressed to the Registrar) by 15 May.

**Senior Research Fellowships and Post-Doctoral Research Fellowships in New Zealand.** The New Zealand National Research Advisory Council is offering Post-Doctoral Research Fellowships and Senior Research Fellowships tenable at any of the branches of the country's Department of Agriculture, the New Zealand Forest Service or the Department of Scientific and Industrial Research. The Senior Research Fellowships are tenable for 9–12 months. They are valued at NZ\$6,420–\$8,200 a year plus travel to and from New Zealand. While in New Zealand Fellows will receive reasonable travelling expenses incurred in connection with research work. Applicants should possess a Ph.D. degree or higher qualification and have a distinguished record of scientific research. The Fellowships are intended for research workers who have had several years' professional experience and have published original material.

The Post-Doctoral Research Fellowships are normally tenable for two or three years. They are worth NZ\$4,870 a year, plus travel to and from New Zealand. Reasonable travelling expenses incurred in connection with research work in New Zealand will be paid. Applicants should have a Ph.D. or equivalent degree. The fellowships are intended for research workers who are recent graduates and who may have had some research experience since graduation.

Application forms for both types of Fellowship are available from the office of the High Commissioner for New Zealand, P.O. Box 820, Canberra, 2601. Applications should be lodged with the Secretary, National Research Advisory Council, P.O. Box 8004, Wellington, N.Z., by 30 September. A detailed prospectus covering awards for research work in New Zealand Government departments is held by Mr K.B. Kaus, Room 38, Chancelry 2A (ext. 4241).

**Free Passage Scheme to North America.** The P. & O. Line offers free return first class sea passages to North America to graduates wishing to go abroad for study or research. Applicants for free passages should intend to spend at least two years abroad before returning to Australia. Application forms are available from Mr K.B. Kaus, Room 38, Chancelry 2A, and should be returned to Mr Kaus by 15 May.

### Fellowships in International Law 1970–71.

The Belgian Government is offering two fellowships to students who wish to undertake postgraduate work in International Law in Belgium. Applicants should have an honours degree, and those wanting to undertake course work must be proficient in either French or Dutch. Proficiency in these languages is not essential for those undertaking research.

Each fellowship offers an allowance of \$145 a month and an allowance of \$55 a month for a wife and \$20 a month for each child. There is also an allowance of \$35 a year for books and equipment and the cost of travel from Belgium to Australia. The student must pay his own fare to Belgium and no provision is made for dependants' travel.

Application forms and further information may be obtained from the Secretary, Department of Education and Science, P.O. Box 826, Canberra City. Applications, supported by an official academic record and reports from two academic referees, should be returned to the Department by 1 May.

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## Classified advertising

### To let

P/t female student wants female about 24 to share flat at Campbell \$25.20/fortnight. Ext. 3609.

### For sale

1968 Renault R. 10 Current model, green, low mileage, excellent condition. Reg. until January 1971. \$1,500. Ext. 2266.

Bed base. 2'6", polished legs. Suit bedsetter. \$8. Ext. 2229.

Holden S/W 1968. HK, 186 Engine, power disc brakes, automatic transmission, 19,000 miles, good tyres and heater. \$2,130. Ext. 3528, B. Arantz.

Triumph 2000 '68, overdrive, white/black. \$2,450. Ext. 4353, a.h. 81 6219.

Rev. Counter. Smiths impulse with housing. \$28. Ext. 4353, a.h. 81 6219.

Speakers. Akai SW-130. \$80. Ext. 4353, a.h. 81 6219.

MGB 1967. My well looked after sports car is for sale at very reasonable price. Full log books, 10 months' reg. Excellent heater and radial tyres. Terms could be arranged. Rodney Page, Geophysics,, RSPHYS.

Silver embossed bridal dress. Long sleeves, knee-length skirt. Purchased West End, London, 1969, never worn. \$25. Ext. 2500.

3 b/r residence Hughes. Est. gardens with mountain view, carpets, brick garage under etc. T/1 at 4 3/4%. Close schools, 10 mins to ANU \$17,500 o.n.o. Ext. 2266.

3 b/r house Macquarie. Lge sep. garage, est. gardens, cnr block. \$7,000 trans. loan. \$17,500 o.n.o. Ext. 2266.

### Public notice

Nominations are called for six (6) positions on the ANU Cultural Affairs Committee.

Any person may be a candidate whether a member of the University or not. However, he must be nominated and seconded by a member of the electorate.

The Electorate. Those eligible to vote:

- (i) Undergraduates — all members of the ANU Students Association.
- (ii) Postgraduates — all members of the ANU Research Students Association.
- (iii) Members of the ANU Staff Association.
- (iv) Members of the ANU General Staff Association.

Nominations must be handed to the Returning Officer at the SRC office by 5 pm. on Wednesday 29 April.

Mark Cunliffe  
Returning Officer

## Staff changes and Appointments

### Appointments

Dr J. Zubrzycki, Professorial Fellow in Sociology, as Professor and Head of the Department of Sociology, School of General Studies.

Professor R.G. Ward, Professor of Geography, University of Papua New Guinea, as Professor of Human Geography.

Dr J. Ferguson, Principal Research Scientist, National Standards Laboratory, CSIRO, as Professorial Fellow in the Research School of Chemistry.

Dr R.A. Gollan, Senior Fellow in History, as Professorial Fellow.

Dr G.B. Barlin, Fellow in Medical Chemistry as Senior Fellow.

Dr P.J. Lloyd, Senior Research Fellow in Economics, as Senior Fellow.

Dr L. Sternstein, Municipal Advisor, Bangkok and Thon Buri Municipality and the National Municipal League of Thailand, as Senior Lecturer in Geography.

Dr M.A. Ward, Lecturer in Pure Mathematics, as Senior Lecturer.

Dr J.B. Smith, Assistant Professor, Department of Veterinary Microbiology, University of California, as Fellow to carry out the duties of Officer in Charge of Experimental Animals in the John Curtin School of Medical Research.

Dr A.M. Baxter, Postdoctoral Fellow, McMaster University, Hamilton, Ontario, as Lecturer in Physics.

Mr J.H. Grainger, Senior Lecturer in Political Science, as Reader.

Mrs S.C. Page, Senior Demonstrator in Psychology, as Lecturer.

Mr B.G. Palfrey, Lecturer in English, Queensland Institute of Technology, as Lecturer in Efficient English.

Dr C. Turner, Senior Tutor in Law, as Lecturer.

Dr A.R. Crawford, Senior Post-Doctoral Fellow, University of Toronto, as Senior Research Fellow in Geophysics and Geochemistry.

Dr R.A.I. Bell, Research Assistant, Department of Nuclear Physics, as Research Fellow.

Dr N.H. Fidge, Senior Research Fellow (Life Insurance Medical Research Fund of Australia and New Zealand), Department of Physiology, University of Melbourne, as Research Fellow in Clinical Science.

Dr G.I. Gaudry, J. Willard Gibbs Instructor in Mathematics, Yale University, as Research Fellow in Mathematics.

Mr C.P. Mackerras, Research Scholar, Department of Far Eastern History, as Research Fellow.

Dr I.A. Nicholls, Postdoctoral Fellow, Department of Geology, University of Toronto, Canada, as Research Fellow in Geophysics and Geochemistry.

Assistant Professor E. Ogan, Assistant Professor of Anthropology, University of Minnesota, as Research Fellow for two years to work on the Bougainville Research Project (RSPacS).

Mr L. Sosula, Research Scholar, University of Adelaide, as Research Fellow in the Research School of Biological Sciences.

Dr B.G. Thom, Assistant Professor in Geography and Director of the Sub-Arctic Laboratory, McGill University, Canada, as Research Fellow in Biogeography and Geomorphology.

Dr B. Walcott, Visiting Research Fellow, Research School of Biological Sciences, as Research Fellow in Behavioural Biology.

Dr J.D. Blake, Department of Chemistry, The James Cook University of North Queensland, as Postdoctoral Fellow in the Research School of Chemistry for one year.

Miss B. Male, Ph.D. student in International Relations, as Postdoctoral Fellow in the Strategic and Defence Studies Centre for one year.

### Visitors

Professor H.B. Barlow, FRS, University of California, as Visiting Fellow

in Physiology for three months from April 1970.

Dr O.E. Bjorkman, Carnegie Plant Biology Laboratory, Stanford, as Visiting Fellow in Environmental Biology for nine months from July 1971.

Professor J. Chesneaux, Professor of Contemporary Far Eastern History, Sorbonne, as Visiting Fellow in Far Eastern History for six weeks from July 1970.

Dr B.H. Jernudd, Senior Lecturer in Linguistics, Monash University, as Visiting Fellow in Linguistics (RSPacS), for between three and five months from June 1970.

Professor S. Kumar, Department of Astronomy, University of Virginia, as Visiting Fellow in Astronomy for about three months from late 1970.

Dr Lynden-Bell, Chief Assistant to the Astronomer Royal, as Visiting Fellow in Astronomy for two months in mid-1970.

Professor A. Maccoll, University College, London, as Visiting Fellow in the Research School of Chemistry for three months from 21 June 1970.

Professor H. McLennan, Department of Physiology, University of British Columbia, as Visiting Fellow in Physiology for four months from June 1970.

Dr F. Smithies, University of Cambridge, as Visiting Fellow in Mathematics for six months from February or March 1971.

Professor K. Awaya, Professor of Anatomy, Yamaguchi University School of Medicine, Japan, granted the status of Honorary Fellow while working in Experimental Pathology for one year from November 1970.

Professor P.F. Philipp, Professor of Agricultural Economics, University of Hawaii, granted the status of Honorary Fellow while working in the New Guinea Research Unit for one year from February 1970.

Mr D.W. Davies, biochemist in the Commonwealth Health Laboratory, granted the status of Honorary Research Fellow while working in

Clinical Science for one year under a Public Service Board Postgraduate Scholarship.

Dr G.M. Polya, Cornell University, granted the status of Honorary Research Fellow while working in Environmental Biology under a Queen Elizabeth II Fellowship.

Dr P.D. Scotti, Department of Molecular Biology, University of California, Berkeley, granted the status of Honorary Research Fellow while working in Microbiology for two years from 1 April 1970 under a Multiple Sclerosis Society Post-doctoral Fellowship.

Dr R.J. Twiss, Princeton University, granted the status of Honorary Research Fellow while working in Geophysics and Geochemistry for one year from about mid-March 1970 under a NATO Postdoctoral Fellowship.

Professor J. Hart, Dean of Science of Lakehead University, Port Arthur, Ontario, to a visiting appointment in Physics for approximately four months from May 1970.

Professor H. Penzl, Professor of Germanic Linguistics, University of California, Berkeley, to a visiting appointment in Linguistics (SGS) for Second Term 1970.

Professor A.R. Prest, Professor of Economics, University of Manchester, to a visiting appointment in the Faculty of Economics for about ten weeks from July 1971.

### Resignations

Professor J.D. Smyth, Professor and Head of the Department of Zoology, from a date later this year to accept appointment as Professor of Parasitology in the Imperial College of Science and Technology, University of London.

Dr D.N. McVean, Senior Fellow in Biogeography and Geomorphology, from 31 August 1970.

Dr I.M.S. Day, Senior Lecturer in Pure Mathematics, from 14 April 1970 to accept appointment as Lecturer in Mathematics in the Open University, England.