Stroll on the Rocks

The success of the field day held on the rocks south of Merewether last year has prompted the Geology Department and the Hunter Valley Branch of the Geological Society to run a follow-up.

This year's Geological Field Day will be held on Sunday, November 18 between 10 am and Noon beginning at Merewether Baths Pavilion.

Members of the Geology Department and the HVBSA will be on hand to explain something of the geology of the magnificent outcrops and cliff sections south of the Baths.

All members of the University community, their families and friends are invited to attend to view the rocks and learn about ancient volcanoes and coal swamps and modern coastal erosion.

The essential details include: Route to be followed - a leisurely stroll on the rock platforms (the tide will be out!) south from the Baths and return. Total distance 1 km.

For further information please contact Dr. Doug Mason (Extension 278), or Dr. Philip Seccombe (Extension 230), in the Department of Geology.

EXECUTIVE RELAXES

Our picture by Roger Broadbent captures a nonsensical moment as the Students' Association's executive relax after the annual elections.

Pictured are Chris Fletcher, Co-Media Officer for 1985, Daniel Lucas, current President of the Students' Association, (behind) Ian Kirkwood, Inter-campus Liaison Officer for 1985, and (seated) Matthew Yates, President-elect of the Association.

The annual general meeting of the Students' Association will be held early in First Term next year and after this meeting Yates and his executive will assume office.

Inside: RESEARCH GRANTS

Volume 10, Number 20, November 9 to 23. Registration NBH 3127.
Dear Sir,

Having just returned from overseas and caught up on my reading of University NEWS, I notice that the topic of equal opportunity has been widely discussed on campus in recent months. This is very much to be welcomed, as is the diversity of views expressed - debate and difference of opinion are always healthy signs in a university.

But it is important to distinguish between two issues. The first relates to the views of individuals and groups concerning questions such as social behaviour, modes of address, sexual stereotyping and the like. Such matters, on which it is not only legitimate but important that differing views be heard, are related to equality of employment opportunity, and for that reason the EEO Unit has circulated a number of news-sheets aimed at raising (sometimes in an awesomely controversial way) the consciousness of the University community on these issues. It appears that the attempt has been successful.

I hope, however, that we shall not lose sight of a more pressing matter. The University is required to present to the State Government by mid-1985 an Equal Employment Opportunity Management Plan. For this Plan to be acceptable and successful, it must accurately reflect the views of University employees as a whole - and if this is to happen, the response rate to the recently-distributed staff questionnaires must be sufficiently high to indicate accurately the views of staff on the matters canvassed. If (for instance) only those staff who felt disaffected were to respond, the picture painted would be an unacceptably negative one: it is obviously not possible to infer any particular attitudes from a non-response.

I am therefore writing to request members of staff who have not replied to the questionnaires to do so as soon as possible. It is not too late to return the forms, and I stress that individuals cannot be identified from the questionnaires. The "follow-up" by the EEO Unit on the return of white cards is not aimed at identifying individuals as non-respondents, but solely at improving the overall response rate.

I appeal to staff for their cooperation in this first stage of preparation of the Management Plan, in order that it may give a true picture of our present practices and of the views of staff (positive or negative) on the need for change.

K.R. Dutton
Director of Affirmative Action.

Dear Sir,

I have resisted the temptation to reply to criticisms of the EEO Unit before because I did not want the University community to feel that we expected everyone to agree with us nor did I want to give the impression that we felt the need to defend ourselves immediately our activities were questioned.

However, I believe the time has come now to correct a few misunderstandings. While the EEO information sheets relating to women (one of which we hoped would be taken lightheartedly) represented only a small proportion of our written material they appear to be the only papers most people read.

We are not only concerned with discrimination on the basis of sex (and males can, and have been, discriminated against too). We are also concerned with discrimination based on physical disability, racial or ethnic origin, marital status or homosexuality.

The EEO Unit is attempting to assist the University in ensuring a fair deal for the whole community.

If the questionnaires are examined it is clear that we are asking for information about other issues than male and female roles. I respect everyone's right to be addressed as they choose, if a woman enjoys being called Mrs., then I for one would not consider it appropriate to try to make her change her mind. If, however, I discovered that she was being discriminated against because she was a 'Mrs.' as has happened in certain areas of employment in Australia, then I would be concerned.

But I am also concerned about the plight of people with physical disabilities who face enormous problems in the workplace. I am concerned to ensure that irrelevant characteristics such as ethnic or racial origin do not hamper an individual in his or her search for work.

If any man in the University feels he is being discriminated against on the basis of his sex I am just as interested as I am in discrimination against women.

Anyone who had asked me personally would have discovered that my reasons for entering the EEO field stem not from a commitment to any one group of people but relate to a strong belief in the need for social justice.

I am sure that other members of the University community share that belief and support what we are trying to do.

MONICA HAYES
Letters

Dear Sir,

I wonder whether the Equal Opportunity Co-ordinator would care to enlarge on the last sentence of her letter, as published in the most recent issue of the University News: "We do not want replies only from those who agree with us".

The implied dichotomy between agreement and disagreement suggests that the questionnaire itself might reflect a willing prejudice and even (if the word is permissible) espouse a partisan commitment. That would be a disappointment to those of us who dared hope that, in giving our time to a University-based questionnaire, we were contributing our admittedly subjective views to an honest attempt at intersubjectivity. It would be a satisfaction to those who dismissed the whole exercise as a waste of time and scarce resources. And it would be a gift to those who suspect that "equal opportunity" has less to do with a genuine equality of opportunity than with Orwell's Newspeak, the very thing for 1984.

While we struggle with our errant pronouns, those who instruct us so confidently in their use might try to recognize that the language has other and subtler ways of betraying the various prejudices that afflicting us all.

J.F. Burrows
Department of English

Dear Sir,

Sheila Pryce-Davies' letter would hardly warrant a serious reply, were it not for her use of such an unworthy tactic as the claim that a "vast amount of bogus info" has been submitted in order to sabotage the EEO survey.

The use of "feminine wiles" rather than ordinary fair play may have been justified in those days when free and open expression was denied to many women in both political and private life. Today the use of such a strategy in debating serious issues has become an ugly anachronism, giving secret solace to male chauvinists of both sexes. Uncle Tom need be lonely no longer.

Jill Gordon
Faculty of Medicine

Dear Sir,

Luke 2: v. 1 "Now it came about in those days that a decree went out from Caesar Augustus, that a census be taken ..."

Some weeks ago all members of staff of this University (and the NCAE) received a letter from the Vice-Chancellor. At about the same time other written materials were also distributed by the EEO Unit. The Vice-Chancellor's letter and the other materials related to a questionnaire. This questionnaire was to be sent to all members of both institutions.

There was to be a Management Plan.

"I speak, you speak, we all speak new speak."

The Management Plan, for two fundamentally different systems, was to be borne out of the same database: interesting: a very promising product is ahead of us, and a challenging marketing exercise as well.

The staff at the University and those at the NCAE have been presented with a census, not a sample. Where a census usually has the statutory authority of Government, explicitly outlining and limiting all of its procedures, through Act of Parliament, this census operates through coercion and fear. The intention has been to obtain an official numbering of people and the recording of associated characteristics and attitudes. The trouble is that with a small and finite population, one which is highly structured according to specialized roles, it is not possible to generate a database which is confidential, in all aspects, and that's a fact. Indeed, to demonstrate that this is so I invite the EEO Unit to give three or four members of the academic and other staff of this University, who have experience in questionnaire analysis and database management, access to the records which they have access to, and it will be demonstrated that individuals can be identified. Indeed if a majority cannot be identified, given the small, structured population, it suggests that there is nothing wrong, either with the questionnaire structure or with the reliability of responses!

The one feature of the procedure which has been followed, which is likely to confound such identification is the lack of a 100 per cent response: and this was hardly designed!

It is no defence for the EEO Unit or the Director of Affirmative Action, that is the Vice-Principal and Deputy Vice-Chancellor, to claim, as he has done in an unsigned letter to me, that there is no intention to try and identify individuals from the questionnaire records. The fact is that without any questionnaire records it would be impossible: not simply unintentional.

On receiving my two questionnaires from the EEO Unit I was surprised to find a numbered white card in the set: this was a third, much shorter device for collecting information, otherwise why include it? I phoned the EEO Unit, afraid to give my name! I had lost my card, what was I to do? Just give us your name and we will send you another one. So it was a coded card with a one to one mapping against my name. What use could it possibly have? There was no way of mapping (cross-checking) returned white cards with
Seven days later, on Friday, November 2nd, 1984 I received a reply by special delivery. The reply was not from Dr. Hayes, the reply was from the Vice-Principal, the Deputy Vice-Chancellor, The Director of Affirmative Action.

My letter, written in confidence to Dr. Hayes did not question any aspect of the EEO Unit's questionnaire. It did question the procedures which have been used, procedures which have discriminated between those who possibly have and those who possibly have not co-operated. We have all been urged to co-operate, particularly by the Vice-Chancellor. The EEO Unit is gaining representation on more and more of the Committees of this University; now even on Senate. The sad fact is that Professor Dutton's assurance to me, in his uninvited letter of 1st November, that 'no prohibition attaches to individual members of staff who choose not to reply', is patently absurd. Indeed so long as members of this or any other university feel that freedom is being threatened, then in an awful sense, it is.

I know that similar procedures have been adopted at one other New South Wales University campus, including the use of white identity cards. The possibility for merging of files and cross-referencing of data, especially those data generated by the white cards, of co-operators and non-cooperators, is a real and frightening one.

It is quite clear, from my recent experience, that CONFIDENTIAL communication between an individual member of staff of this University and a named member of the EEO Unit will NOT be kept in confidence.

This is shameful. The solution is straightforward. Don't communicate.

May I conclude by stating that this letter is not about the rights and wrongs of Equal Employment Opportunity, or about asking staff to present their views, it is about confidentiality, anonymity, freedom and coercion. It is about The State and the University. I will conclude with a quotation from The Vice-Principal, or is it the Deputy Vice-Chancellor, or is it the Director of Affirmative Action?

"The University's Management Plan must be acceptable to government and successful in identifying the attitudes of staff."

(Cited from an uninvited letter, written by the Vice-Principal, Deputy Vice-Chancellor and Director of Affirmative Action, Professor K.R. Dutton, to Associate Professor D.N. Parkes, November 1st, 1984.)

God help us!

Dr. Don PARKES,
Associate Professor of Geography.

10% Discount

Mr. Warren Kimble, Chairman of the Board of the University Co-operative Bookshop Limited, has announced that the pre-audit trading results of the Co-op indicate a reassuring level of profit for the financial year ending August 31, 1984.

Mr. Kimble said that the performance was largely due to the increased level of support which students and staff had given to the Co-op Bookshop. The profits would be made available to shareholders in the form of increased discounts.

From November 1 to March 31 the discount for cash, or cheque, purchases would be increased to 10 per cent. Bankcard purchases and mail order transactions would still attract a 5 per cent discount.
Members of the Universities Council were photographed at the Department of Architecture during their visit to the University on October 24 and 25. The Council completed a lively programme of discussions and inspections. (From left): Professor H.G. Gebber, Professor M. Carter (University of Newcastle), Ms W.J. McPhee, Professor D. George (University of Newcastle), Professor D.N.F. Dunbar (Chairman), Mr. D.H. Gallagher (U.C. Secretariat), Assoc. Professor I.F. Morrison, Mr. C.W. Burgess (U.C. Secretariat) and Professor M.I. Logan.

Attention - STAFF & STUDENTS

At present the computer VAXA is dedicated to the use of Academic Staff and Administration and VAXB to the use of students. During 1984, these machines were overloaded, particularly during the hours from 9 am to 5 pm.

A decision has been made to purchase VAXC, a VAX 11/750, to be used solely by the Bursar's and Secretary's Divisions, thereby reducing the load on VAXA. There are also proposals to increase the memory on VAXA and VAXB and to purchase a UNIX operating system in anticipation of the eventual replacement of the PDP 11/45 machines.

The Computer Users' Committee of Senate is interested in the opinions of computer users and wishes to invite all staff and students to comment on the above arrangements.

Please send your comments in writing to Mr. D.L. Farmer, Secretary's Division, University of Newcastle, 2308, using the University internal mail where possible.

Professor R.J. MacDonald, Chairman, Computer Users' Committee.

PRIESTS AND PROSTITUTES
Recovery Ball...

MONDAY, 26th NOV
7:30 - 1:30
Featuring "Q.E.D."

- PRIVATE LIVES - GRINGO LOCO
- BANTUM BUSH BAND

TICKETS ON SALE: WESTPARK BANK...
$7. STUDENTS $9. GENRED INCL.
Mr. Frank Barker and Dr. Rob Evans are partners again in research.

Whilst attached to Williamtown RAAF Base in the early 1970s, they collaborated on the installation of a highly advanced radar tracking system. Frank was working for Plessey Radar Ltd., of the United Kingdom, and Rob was an engineer with the RAAF.

With the arrival of Mr. Barker as a Visiting Research Fellow in the Department of Electrical and Computer Engineering, he and Dr. Evans, now Senior Lecturer in the Department, have been able to complete a draft manuscript of a joint publication, An Introduction to Radar Surveillance Tracking, to be released by the IEE of the United Kingdom.

In addition to his research activities, Mr. Barker has been investigating the provision of support for university research and development as high technology offsets against Federal Government overseas purchases.

"In Canberra, the proposal is strongly supported by the Department of Science and Technology, and the Offset Branch of the Department of Defence Support," he says.

"Moreover, a new 'Teaching Company Scheme' should be activated soon and this scheme will assist universities to place Ph.D. students inside private organisations as researchers."

As well as being Head of Operations Research in Plessey Radar, Mr. Barker is responsible for Graduate Recruitment and Education. He says he is actively encouraging women graduates who major in Mathematics, Economics and other disciplines to look for careers with high technology companies.

Since working closely together at Williamtown RAAF Base, Mr. Barker and Dr. Evans have maintained their research relationship and have co-authored a number of papers dealing with radar tracking.

Mr. Barker obtained his educational and professional experience in the Royal Navy between 1950 and 1957, serving in the Korean, Malaysian and Cyprus campaigns and at Suez with the peace-keeping forces. As a Radar Systems Analyst for Plessey, he came to Australia for the first time in 1963 and discussed collaboration with the RAAF.

He has more than 15 years' experience as Industrial Fellow Commoner at Wolfson College in Cambridge, in which role he is fostering relations between industry and universities.

Having first visited the University of Newcastle in 1970 at the invitation of Professor B. Anderson, he is well qualified to comment on the relationship with local industry. "A very large amount of credit belongs to the people in this University who have actually maintained contact with industry. I will do everything I can to encourage more collaborative ventures."

Mr. Barker lives in Walton in Surrey. He and his wife, who is a linguist, have three sons. Mr. Barker's stay at the University concludes on November 15.

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**Priests and Prostitutes**

Recovery Ball...

**Mondat, 26th Nov.**

7:30 - 1:30

Featuring 'Q.E.D.'

- Private Lives
- Gringo Loco
- Bantum Bush Band

Tickets Can Be Purchased Through Student's Union.

$7 Students
$9 Guests

Supper Included.
Mr. Bill Jones was recently appointed Secretary-Treasurer of the Australian Soccer Referees' Federation.

When he's "at home", Mr. Jones is supervisor at the Squash Pavilion, employed by the Sport and Recreation Department.

Mr. Jones is the first resident of Newcastle to become the referees' chief administrator.

The appointment is for a three-year term in which he will be the voice of referees in dealings with the National Soccer League and the Australian Soccer Federation.

Varying your exercise can be a good way of maintaining interest, particularly if you're just beginning. Mix up your exercises each day (e.g. running, swimming, cycling, walking) to give yourself an opportunity to choose the type you like most.

Plan your exercise sessions in advance, preferably the night before, so they can't be put off. If a mate system is used reneging on a commitment becomes much more difficult.

One of the main benefits of exercise often stressed by psychologists is its value as a form of stress relief, or "time out" from other aspects of life. To this extent, some people find exercise a useful form of mental relaxation where fantasy, imagination and creativity come to the fore. Imagery rehearsal, where the planned exercise is continuously imagined before it's carried out, is another technique of maintaining your motivation.

Either draw up a contract with yourself, or have an instructor or friend to do it for you. Then try to stick with that contract to carry out a certain amount of exercise each week.

Be Wise Exercise !!!

Now is the time for all good people to commence their Christmas shopping by visiting their Sport and Recreation Shop at the Squash Pavilion. Don't delay - it's later than you think!

Terry Farrell and Albert Nymeyer finished the cross country season on a winning note.

On November 3 Terry won the Raymond Terrace Twin Rivers 9.5 run in a time of 29 minutes one second. On the following day Albert won the Valentine Lions Club six kilometre run with a time of 19 minutes 20 seconds.

Coincidentally, both runners recorded personal bests over 5,000 metres at Newcastle Inter-club held the prior Wednesday. Terry ran a marvelous 14 minutes 52 seconds, shattering his previous best time by 29 seconds, and was placed second in the race. Albert recorded 15 minutes 46 seconds and was a distant third. The winner of the race, by the margin of one second, was Auther Kingsland. While Auther is a member of staff of this University, he does not run for the University Club.

The annual University Evening Indoor Soccer Competition will commence on December 3 in the Auchmuty Sports Centre. Matches will be in progress from 6 pm until 10 pm. Spectators may attend and are welcome.
$1,737,692 in GRANTS

A record amount in research funds has been granted to the staff of the University for research in 1985 by the Australian Research Grants Committee and the National Health and Medical Research Council.

A total of $1,737,692 has been awarded by the ARG and the NH&MRC. This compares with $1,566,115 approved by the bodies last year.

Further support for staff research projects has come from the National Energy Research, Development and Demonstration Council (NERDDC), which has announced approval for grants totalling $75,573 for two projects.

Support has been given by the ARG for nine new projects valued at $123,303 and 21 continuing projects worth $400,249. Further, the committee has approved a new grant for research at the University, called a Programme Grant, worth $87,398 per annum until 1990.

The University has attracted a total of 31 grants valued at $1,126,745 from the NH&MRC.

The ARG programme compares with 37 worth $570,793 approved last year, while staff attracted from the NH&MRC last year a total of 30 projects valued at $995,322.

**ARGC**

Professor A.L. Hooker, An Evolutionary Epistemological Theory of Scientific Progress, $24,901.


Professor N.R. Cattell, Syntactic Structure in the Language of French and Polish Migrants, $8,000.

Dr. A.F. Ashman, Generalisation Following Cognitive Training with Mentally Retarded Adolescents, $6,000.

Assoc. Professor B. Fenelon, Brain Responses in Predicted and Unpredicted Stimulation Sequences, $22,000.

Assoc. Professor B. Fenelon and Dr. D.C. Finlay, Electrophysiological Study of the Perception of Apparent Motion, $19,000.

Dr. R.A. Heath, Parallel Distributed Models for the Storage and Retrieval of Spatiotemporal Information in Human Memory, $9,800.

Dr. J.R. Kirby, Effects of Text Structure and Language Learning Strategies upon Comprehension, $6,451.

Professor A.J. Guttman, Problems in Lattice Statistics, $28,000.

Professor A.J. Guttman and Assoc. Professor W.A. Gates, The Application of Monte Carlo Methods to Some Lattice Statistical Problems, $10,000.

Assoc. Professor W.D. Wallis, Applied Combinatorial Mathematics, $9,400.


Assoc. Professor B.J. Fraser, Propagation Studies of Hydro-magnetic Waves between Spaced Stations, $43,491.

Professor R.J. MacDonald and Dr. D.J. O'Connor, Neutralisation and De-Excitation of Scattered Ions and Atoms from Ion Bombarded Surfaces, $31,000.

Dr. D.J. O'Connor, Medium Energy Ion Scattering for Surface Structure and Composition Analysis, $12,090.

Professor W.F. Pickering, Factors Affecting Ion Retention by Soil Components, $13,100.

Dr. J.W. Patrick and Dr. C.E. Offer, Phloem Unloading of Photosynthates, $15,821.

Dr. R.J. Rose, Chloroplast DNA: Organisation and Modification via Protoplasts, $18,500.

Assoc. Professor B.A. Engel and Dr. L.M. Harris, Evolutionary and Palaeogographic Studies of Carboniferous and Permain Bryozoan and Trilobite Faunas of Australia, $11,667.

Dr. R.J. Loughran, Hillslope Erosion and Sedimentation, $3,316.

Dr. P.K. Seccombe, Fluid Inclusion Studies and Deposition at Cobar, New South Wales, $13,159.

Professor G.C. Goodwin, Professor A. Cantoni, Dr. R.J. Evans and Dr. D.J. Hill, Robust Control and Communication Systems, $87,398.

Assoc. Professor W.A. Gates and Dr. J.D. Browne, The Structure and Thermodynamic Properties of Alloy Hydrides, $20,808.

Dr. J.A. Raper, Evaporation of Droplets in Moving Gas Streams, $6,657.

Dr. K.K. Salooja, Watchdog Processor Based Architecture for Application of General Rollback Techniques, $5,870.

Professor R.A. Antonia and Dr. A.J. Chambers, Transfer Processes in Turbulent Shear Flows, $60,008.

Dr. L.W.B. Browne and Professor R.A. Antonia, The Viscous Sublayer Underneath a Turbulent Flow, $13,773.

Professor G.J. Jameson, Fine Particle Entrainment and Drainage in Flotation Froths, $16,970.
Assoc. Professor B.L. Kartha-Too, Theoretical Investigation of the Fracture Behaviour of Elastic Composite Materials, $20,000.

Dr. A.W. Page, The Deformation and Failure of Brick Masonry under Biaxial Stress, $17,098.

Assoc. Professor R.C. Jones, of the Department of Biological Sciences, and Professor B.P. Setchell, of the University of Adelaide, were jointly awarded $19,504 by the ARC for a project, Regulation of the Functions of the Initial Segment of the Epididymis.

NH & MRC

Professor R.C. Burton, Natural Killer Cell Specific Alloantigens, $71,046.

Dr. S.L. Carney, The Role of Calcitonin in Renal Calcium and Magnesium Homeostasis, $46,368.

Professor L.A. Chahl, A Study of the Role of Substance P in Drug Withdrawal Responses in Animals, $23,527.

Dr. A.W. Cripps, The Role of Haemophilus Influenzae in the Pathogenesis of Chronic Bronchitis, $45,494.

Dr. J.F. Gerkens, Mechanisms and Prevention of Drug Induced Nephrotoxicity, $89,527.


Dr. D.A. Henry, Prescribed Anti-Inflammatory Drugs and Ulcer Complications in the Elderly, $20,186.

Dr. M.J. Hensley, Respiratory Illness and Immune Development in the First Year of Life, $66,262.

Dr. A.J. Husband, Control of Mucosal Immune Responses, $32,849.

Professor B. Raphael, Vulnerability to Alcohol Abuse among Adolescent Boys, $34,805.

Professor B. Raphael, Vulnerability of Adolescents to Psychosocial Morbidity, $12,237.

Dr. J.A. Rostas, Topography of Surface Molecules in Fast and Slow Skeletal Muscle Fibres, $25,922.

Professor R.W. Sanson-Fisher, Randomised Clinical Trial of General Practitioner Interventions with Smokers, $21,187.

Professor S.W. White, Functional Mapping of CNS Control of Coronary Conduction in the Dog, $36,512.

Assoc. Professor R.D. Barry, Characterisation of Human Parainfluenza Viruses, $46,766.

Dr. M. Brimstead, Endorphins and the Hypothalamic Pituitary Adrenal Axis in Post Partum Blues, $33,173.

Dr. L.A. Chahl, Functional Interactions between Putative Neurotransmitters in Guinea-Pig Ileum, $20,179.


Dr. P.R. Dunkley, Calcium-Stimulated Protein Phosphorylation and Neurotransmitter Release, $31,932.

Professor B. Fenelon, Effects of Refractive Error, Strabismus and Amblyopia on Stereoscopic Vision, $52,330.

Dr. J.F. Gerkens, Mechanism of Antihypertensive Action of Frusamide, $20,718.

Dr. A.H. Gillies, The Renal Interstitium as a Control of Renal Angiotensin, $20,567.

Dr. A.J. Husband, Modification of the Immune Response by Behavioural Conditioning, $27,469.

Professor J.S. Robinson, Gluconeogenesis before and after Birth in Experimental Fetal Growth Retardation, $29,021.

Professor J.S. Robinson, Maternal and Fetal Placental Blood Flow when Placental Growth is Restricted, $21,649.

Dr. N.A. Saunders, Dopamine and Ventilation in Man, $25,569.


Dr. J.A. Rostas, The Effect of Steroid Hormones on Saptic Plasticity, $30,297.


Dr. N.A. Saunders, Endorphins and Control of Breathing, $45,681.

Dr. R. Smith, Cerebro Spinal Fluid b-endorphin and Metenkephalin During Pain and Stress, $30,093.

NERDC

Assoc. Professor C.F.K. Diesel, Coal Characterisation by Vitrinite and Inertinite Fluorescence, $37,986.

Assoc. Professor T. Wall, The Fuel-Nitrogen Ratio as an Index Characteriser of Pulverised Steam Coal, $37,587.

Hunter Wetlands Trust

Membership forms are available from Assoc. Professor M. Meldrum, C/- the Department of Education, or Mr. Glenn Albrecht, C/- the Department of Philosophy.
SUPPORT FOR WIND TURBINES

An academic from the University of Newcastle and an academic from the University of Sydney are jointly participating in a research project aimed at dramatically improving the performance of wind turbines, including those used to produce power in the Outback.

The researchers, Dr. David Wood, of the Department of Mechanical Engineering, and Dr. Clive Fletcher, of the University of Sydney have received a grant of $23,000 from the ARGC to continue their study of diffuser-augmented wind turbines.

With wind speeds in the Outback usually very low, it is important to improve the performance of the wind turbines used to generate power.

Dr. Wood says that the power output of a wind turbine can be increased significantly by enclosing it with a diffuser, which is a passage of increasing area, like a funnel in reverse, with the turbine at the narrow end.

The increase occurs partly because the diffuser causes more air to be sucked through the turbine blades. The blades impart a swirl to the flow, so that the air particles, on average, move through the diffuser along a helical path, a bit like a corkscrew that always increases in size.

Swirl helps the flow to stay "attached" to the diffuser wall, he says, but excessive swirl causes large "dead air" regions to form reducing the diffuser's ability to suck air through the blades.

The preliminary work done by Dr. Wood and Dr. Fletcher shows that an optimum diffuser-augmented wind turbine will need to operate close to the onset of the dead air region, so a thorough understanding of them is essential.

All the experiments will be done by Dr. Wood and P.O. Clausen at Newcastle University, while the bulk of the computations will be done by Dr. Fletcher at Sydney University.

STOP PRESS

The two student members of the University Council will be Pauline Kilby and Matthew Yates. In the election, the first in which students have had a postal ballot, Pauline topped the poll by a large majority and Matthew got in after distribution of preferences. They will hold office until June 7, 1986.

Pauline is a mature age student and in her election statement she promised action to improve such matters as flexibility in the assessment of courses, the high enrolment fees for part-time students and child care facilities on campus.

Matthew is President-elect of the SRC who promises a well informed and represented student body in 1985.

Last Chance to Take Part in the EEO Survey

Would all members of Staff who are intending to take part in the EEO Survey please return their questionnaires as soon as possible. Final Deadline for return is November 13. If you wish to take part, but have mislaid your questionnaires, contact the EEO Unit for replacements. We would like to thank the 70 per cent of staff who have already participated.
Professor Max Maddock, Assoc. Professor of Education will travel to Panama City, Panama in December, at the invitation of the National Science Teachers Association of U.S.A. and the Organisation of American States, to present a paper at the Inter-American Seminar on Science Education and Cultural Environments in the Americas. His trip is being funded by the Organisation of American States. Science educators from all the American and Caribbean nations will be attending.

The conference will be the first of its kind in which science educators from leading universities and educational research centres in the Western Hemisphere will meet to deliberate issues from a multi-national perspective. Themes to be addressed are Ethnoscience – children’s cultures, cognition and science learning; theory, goals and strategies for teaching science; Developing effective science programmes; and Educating science teachers to teach culturally diverse students. Professor Maddock has been invited to speak to the theme of developing effective science programmes, because of his research work on evaluating science curricula in the developing countries, Papua New Guinea, Tonga, Western Samoa, The Philippines, Tanzania, Kenya and Ethiopia.

The paper has to be prepared in both English and Spanish language versions to be published in the seminar proceedings.

This is the third international conference at which he has been invited to present papers on similar themes. In November last year he was funded by the Commonwealth Foundation to present one of the lead papers at the International Symposium on Cultural Implications of Science Education held in Nigeria, and in September this year he presented the Keynote Address for the theme Educating for and in Science at the Waigani Seminar in Papua New Guinea, sponsored by the Papua New Guinea and French Governments and UNESCO to provide guidelines for a three year policy on Science and Technology for the Papua New Guinea Government.

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Investing Your Money

Visitors to the University on the two days of Open Day had a chance to win prizes in an investment quiz.

Mr. R. Gibbins, of the Department of Commerce, arranged a questionnaire in which visitors were asked to rank investments which would have given the greatest rate of return over the last 20 years. In the quiz you could have put your money into gold, land, shares, Government Bonds, a sock, copper, a fixed deposit, debentures, electronic equipment or fuel oil.

How will the next 20 years differ from the last 20 as far as the investor is concerned?

These questions and more are answered by Mr. Gibbins in a seminar, Investing Your Money, to be held on November 24 in the Medical Lecture Theatre starting at 2 pm.

The seminar will give staff and members of the public the opportunity to discuss the basic philosophy of investment. The session will cover such aspects as direct share investment, company debentures, unsecured notes, Government bonds, banks and building societies and gold and real estate.

This year's Antique Fair at Morpeth will be different from previous Fairs in at least one respect. The Fair will begin with a gala preview and cocktail party organised by The Friends of The University.

The preview and cocktail party will be held at the Antique Fair from 7 pm to 10 pm on November 29. Tickets cost $5 and can be obtained from the Departments of Mechanical Engineering and Education, the Faculty of Medicine and Mrs. W. Kellerman (43 0732).

The Fair will continue for three days (Friday to Sunday, 10 am to 5 pm) with The Friends catering for morning tea, lunch and afternoon tea on each day.
Soil Conservation Work Supported

Dr. Loughran, with Mr. B. Campbell, of the AAEC and Mr. A. Williams, of the Department of Geography, carrying out studies on sedimentation. Photo: R. Jurd (AAEC).

Dr. Bob Loughran, of the Department of Geography, is a key person in a new National Soil Conservation Programme research project.

The Department of Primary Industry has awarded a grant of $12,933 to the Department, the Australian Atomic Energy Commission and the New South Wales Soil Conservation Service to assess soil erosion and sedimentation using the environmental tracer, caesium 137, and soil magnetic properties.

Since the European settlement of Australia, agricultural practices, such as tillage, have greatly increased the extent of soil erosion. Half of all Australian agricultural land is now affected and it is only by implementing soil conservation programmes at the national level that the deterioration can be halted and possibly reversed. The first criterion is measurement of all phases of erosion and sedimentation, and it is serendipitous that in this, man-made caesium 137, as fall-out from nuclear explosions, can be utilised.

The caesium atoms become strongly attached to soils and sediments. Where there is little or no cultivation or erosion, the caesium is confined to the topmost layers of the soil. Cultivation distributes the caesium more evenly over the tilled depth, and erosion can deplete the caesium content either in narrow channels or over wide areas. Determining the profile of caesium concentrations in soils therefore provides data for estimating the extent of erosion.

Eroded materials that are transported by wind or water will come to rest at another location. Sediments therefore build up in alluvial fans, flood plains, farm dams and reservoirs. Measuring the caesium in these sediments enables scientists to estimate the rate of deposition of the sediments.

Work has already been conducted in the catchment of Maluna Creek and Deep Creek at Pokolbin in the Hunter Valley. These studies showed how caesium could be used to profile soils, and how erosion in one place was complemented by sedimentation in another.

The NSCP grant will enable this work to be extended into the wheat areas of northern New South Wales and southern Queensland where erosion is causing considerable concern. The caesium 137 techniques are being supplemented by additional measurements on the magnetic properties of the soils and sediments which will help the scientists to trace sediments to their origin.
Macquarie Dictionary

Professor Arthur Delbridge, Editor of the Macquarie Dictionary, will be guest speaker at the next meeting of the Hunter Valley Branch of the Australian Federation of University Women.

The meeting will be held in the Staff House on November 28 at 6.30 for 7 pm. Tickets can be obtained by telephoning 23 557.

Travellers in Time

The Department of History will screen the award-winning film First Contact, which looks at the “first” European patrol into the Highlands of Papua New Guinea in 1933, on Thursday, November 15, at 1 pm in the Main Lecture Theatre, B01.

VP meets former PM

Mr. E.G. Whitlam, Australia's Ambassador to UNESCO, is pictured in discussion with the Vice-Principal, Professor Ken Dutton, at a reception hosted by Mr. Whitlam in Paris to mark the launching of a recent book by Professor Dutton on contemporary French poetry. Professor Dutton was in Europe to attend a seminar on higher education and to carry out research.

A SAD EVENT

The death of Mrs. Margaret Auchmuty in Newcastle on October 30 saddened her friends from the University. Mrs. Auchmuty, whose husband was Foundation Vice-Chancellor, had been ill for several months.

A funeral service was held in Christ Church Cathedral on November 2. During the service an address was given by Canon Victor Pitcher, who had more than 20 years' association with the University as Chaplain and Tutor.

Mrs. Auchmuty is survived by her son, Giles, and her daughter, Rosemary.
UNIVERSITY/INDUSTRY LINKS

Business leaders and the universities have been aware of the need to improve consultation and co-operation in the sphere of science and technology. According to the Business Council of Australia and the AVCC, there has been good collaboration in some areas but in others there is a clear need for improved communication, with the objective the optimum use of resources allocated to scientific research and technology.

The Prime Minister, Mr. Hawke, has recently expressed similar views. In separate meetings with the Business Council of Australia and the Australian Vice-Chancellor's Committee, he urged both bodies to explore ways of improving university-industry co-operation.

A meeting between representatives of the Business Council and the AVCC was held in Sydney on October 12. The meeting was chaired by Mr. J.A.J. Hooke, Chairman and Chief Executive, Amalgamated Wireless, who is Deputy Chairman of the Science and Technology Committee of the Business Council.

The discussion centred around the nature of present interactions between universities and industry which in many areas are long standing and extensive, but in others offer scope for substantially greater collaboration. The meeting also identified impediments to extending and broadening co-operation, and explored ways in which both the Business Council and the AVCC might work together to remove these impediments.

The major outcome of the meeting was to establish a Joint Working Party, chaired by the Business Council and AVCC on ways by which collaboration can be further strengthened. The meeting asked the Working Party to consider a number of matters, including:

- how to promote more effective consultation between the universities and industry and to improve the two-way flow of information between them on research and industry requirements,
- the possibility of developing particular methods of co-operation between industry and the universities including the appropriateness of adapting overseas models, for example teaching companies, to the Australian situation,
- how Business Council members view the quality and quantity of graduates they receive from the universities.
- the adequacy of first degrees and postgraduate degrees to prepare people for work in industry and commerce,
- the possibility of joint university/industry contracts being negotiated which attract State and Federal Government support for research.

The composition of the Joint Working Party will be announced shortly.

Both organisations are confident that the Working Party's activities will lead to better communications and understanding between the universities and business. They both welcome the interest which the Prime Minister has taken in the move towards greater university/industry co-operation, and they have undertaken to keep him informed of the progress which is made.

Tutors Wanted

The WEA would like to involve more tutors from the University in its Adult Education Programmes.

The mutual sharing of Adult Educators provides an invaluable link between the University and the community and helps WEA retain the quality of tutors its students have come to expect.

If you think your subject may be of interest to WEA students, and you would like to become an active participant in Adult Education, please contact Dr. John Turner, Community Programmes, at Extension 600 or the WEA at 63 Union Street, Newcastle (26 4066).

The subject matter of a course proposal does not have to be within the area of your academic expertise, an interest-hobby can be equally as useful.
Why Not Join?

Membership of the Nimrod Publications Society costs only $20, and for that you get:

- The six volumes in the Nimrod's Quarry series, each one signed and numbered, worth $36.*

- A free copy of each of the other Nimrod Publications books, while stocks last.

- A free copy of the volume published recently, Aussie Mog, by local poet Keith Russell, from a restricted numbered edition (worth $4.50).

- The chance to support writers of the Hunter Valley fast becoming the major centre for poetry in Australia.

Please send money and mailing address to The General Editor, Nimrod Publications, English Department, University of Newcastle, 2308.

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The graphic is being widely used by the Advertising Federation of Australia as part of a programme to inform graduates about career opportunities in advertising.

Copies of the notice are presently displayed on notice boards across the University.

Advertisement

For Sale

1973 Toyota Corona, automatic, brown in colour, excellent condition, low mileage. This car was bought by visitor on Sabbatical Leave and must sell the car after Christmas. (Registered to November, 1989). Asking price: $2,500. All interested persons are requested to telephone 43 9021 after 5 pm.
Wanted to Buy

A vehicle to $1,500 for a second car. Age no problem but must be in reasonable condition. If you are able to assist please telephone 43 4162.

For Sale

Large five bedroom house with lounge, dining room, study, rumpus room, two bathrooms, plus many inclusions. Elevated position in Mayfield. Close to shopping centre, transport and schools. All interested persons are requested to telephone Extension 654 or 68 3245.

Situated in a colourful garden setting, in a quiet, pleasant, suburban street only five minutes from the University and CAE, the house is white brick veneer and has three bedrooms and study or four bedrooms, ensuite to the main bedroom, modern kitchen with dishwasher, lounge and separate dining room, and air-conditioning. The house is only 10 years old and is in immaculate condition. All interested persons are requested to telephone 67 2250 or Extension 460.

1977 Cortina, two litre sedan, manual, excellent condition. Asking price: $2,700 or near offer. All interested persons are requested to telephone Elinor at Extension 544.

HJ Premier - late 75 model. Automatic, air-conditioned, radio cassette, registered to October, 1985 - sound condition. Asking price: $2,500. All interested persons are requested to telephone 48 7191 after 5 pm.

Honda CB1000, 1972 vintage; looks rough but has a heart of gold; goes well, ideal L machine, eight months rego. Asking price: $150. All interested persons are requested to telephone Dieter at Extension 423 or 796.

Professor A.J. Guttmann, of the Department of Mathematics, Statistics and Computer Science, was recently awarded a $14,000 CSIRO research grant to be used to buy time on CSIRO's new super computer, the Cyber 205. The Cyber 205 cost $10,000,000 and is Australia's largest. It is one of the largest scientific computers available in the world.

The speed of the machine is achieved by its vector stream processing, permitting up to 800 million 32 bit floating point operations per second with four pipelines.

Professor Guttmann's grant is for a project entitled Numerical Study of two and three dimensional self-avoiding walks.

Advertisements

Master's Gown, men's size, good condition, any reasonable offer. All interested persons are requested to telephone 67 4728.

Undergraduate academic gown in excellent condition $85. All interested persons are requested to telephone 25 247 before November 20.

Accommodation Available

Northern Rivers CAE still has accommodation in Town Houses or Logan Units available in Lismore at very reasonable rates for the later part of the Christmas holiday period. More information from The Secretary, P.O. Box 157, Lismore, 2480.

International House at the University of Sydney, located two miles from Sydney, has many facilities to offer families or single persons holidays in Sydney. More information from International House, 96 City Road, Chippendale, 2008.