Howard Worner - A Colourful Career
Wollongong Initiates Graduate Consortium
Andrew Schultz’ Award-Winning Opera
New Campus in the Gulf

SPRING/SUMMER 1993
Hello again. I hope that you have all had a successful and healthy 1993, and I pray that 1994 will be equally kind to you and your families.

Open Day, one of the premier events in the University calendar, took place at the end of August and in conjunction with this we held our first Alumni Association reunion. It was for graduates from the early years - the 1960s and 70s - and though we were short on quantity, we were certainly high on quality in those who returned to tread once again the 'hallowed turf' of the old Alma Mater.

To use a colloquialism, 'we had a ball'. All were amazed during the campus tours at the changes that had taken place, but equally they all said how beautiful the campus had become. During the barbecue the joyous laughter was testimony to people having a good time. A full report appears on page 16.

I would sincerely like to thank all those who took the opportunity to come, and I do hope to see you again on campus somewhere down the line. By the way, alumni came from Perth, Wagga Wagga, Canberra, Sydney, Wollongong and Shellharbour - quite a geographical spread.

Even at this early stage I ask those of you in the graduating period 1980-83, to whom we shall send invitations for the 1994 reunion, to please mark down the last Sunday in August for what will be a very enjoyable reunion visit to YOUR university. I would also urge you to contact a few fellow student friends from your time here and meet with them on the day. We do hope to have a surprise or two in next year's program, so stay tuned.

Just in case you are not aware, our Alumni Association is broken up into chapters, each of which is autonomous in operation. Reports on these appear in this issue, bringing you up-to-date with their activities.

Our first AGM is to be held in February 1994, details of which appear later in the magazine. Like most AGMs it will be over in a short time, and we hope to see you there to let us know how your Association can be better run. We value your feedback.

In closing, may I again ask that if you know any fellow alumni who do not receive this magazine, please ask them to give us their current address. Many thanks in anticipation.

Keith Phipps
President, Alumni Association

A unique Symposium was held at the end of July to honour Professor Howard Worner, who celebrated his 80th birthday. This remarkable man, a 'quiet achiever' whose talent for invention and original thought knows no bounds, was joined by many eminent colleagues and fellow researchers from Australia and beyond in a very special gathering held at the University.

Wollongong University's lead in the provision of professional and graduate education through the national television network is a recent initiative of paramount importance. The development of the Wollongong Graduate Consortium with the Special Broadcasting Service is just the first step towards a new multimedia approach in the provision of education.

Other articles look at Wollongong's new campus in the United Arab Emirates, the award-winning film of Andrew Schultz' opera Black River and the School of Journalism's Professor Clem Lloyd, recently awarded an AO. The alumni profiles range from the Archbishop of Sydney to four graduates who are all Wollongong City Councillors, and also include the University's first Asian student.

May I urge all alumni to attend the Association's AGM on 26 February 1994. This is scheduled on a Saturday to enable those out of town to come along and still have time for a night out afterwards. Remember, it's your University and your Association, so this is your opportunity to have a say.

With best wishes for Christmas and the New Year.

Keith Phipps
President, Alumni Association
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Newspaper editors are invited to make use of any material in this journal. Acknowledgment of the source would be appreciated.

The front cover shows Professor Howard Worner at Port Kembla (see page 4). Photography by Simone Rose.
To celebrate, he was honoured with a Symposium attended by a most prestigious array of more than 150 of his peers and was profiled across the nation by The Bulletin magazine and The 7.30 Report on the ABC.

The publicity brought a deluge of 200 letters and countless telephone calls, in some cases from people Howard lost track of 45 years ago. The Symposium, held in the University’s Hope Theatre on 31 July, brought together a star cast of scientists, engineers and industrialists to honour one of Australia’s outstanding metallurgists and inventors. As founder of the Microwave Applications Research Centre (MARC) within the University’s Illawarra Technology Corporation, where he now works, Howard’s creative talents are still as energetic as ever.

For a modest man who has never cultivated publicity or popularity, Howard Knox Worner received plenty of both as he turned 80 in August. Speaker after distinguished speaker at the Symposium acknowledged his great achievements.

President of the Australian Academy of Science, Professor David Craig said, ‘Part of the country’s debt to Howard Worner is his world view that basic science and applied science must march together as partners, not rivals.’

Professor Keith Brimacombe of the University of British Columbia and President of the international Minerals, Metals and Materials Society, who travelled from Canada especially for the Symposium, spoke of Howard’s romanticism, heroism and optimism. ‘These are words that describe many great men and women - people who stand out because of their attitude to the human condition, to living, and cause them to achieve,’ he said. ‘These are certainly attributes that characterise Howard Worner’s unique career and set him apart as a great man.

‘Greatness is not only measured in hard achievement but in the dreams and heroic efforts of men and women who would make a difference. Howard is such a person, bursting with ideas and the passionate desire to pursue them. The metallurgical communities of Australia and the world are the beneficiaries of this unique individual who, while gardening on a Saturday afternoon in 1960, conceived how continuous ironmaking might be integrated with continuous steelmaking - and went on to pursue his dream.’

And so the plaudits rained - from other academics like Sir Rupert Myers, President of the Australian Academy of Technological Sciences and Engineering, and Professor Nancy Millis, Chancellor of La Trobe University, to Mr Brian Loton, influential Chairman of BHP, and Mr John Innes, Group Executive of mining giant CRA. Howard knows the last two men and their companies well - in 1955 he was appointed BHP’s first director of research, and served CRA as director of new process development between 1963 and 1975.

Howard branched into industry after spending the post-war decade as professor of metallurgy and dean of engineering at Melbourne University. (When he left there his brother Hill took over the metallurgy chair until 1975 and also became dean of engineering - a unique succession in Australian academia.)

In 1986, aged 74 and in ‘semi-retirement’, chairing federal and state government committees on energy and other strategic issues, Howard and his wife Rilda moved to Wollongong to be closer to their daughter Ruth and her family. (Ruth is a Wollongong graduate and is profiled on the page opposite.)
Howard explains, ‘I was supposed to retire for good when Ken McKinnon grabbed hold of me and said, ‘Look, we’d like you to take up the directorship of a new research centre.’ They’d heard I was interested in applying microwave irradiation to the processing of different materials. So I put my mind to it and we built up the Microwave Applications Research Centre.

‘It was a great privilege to be associated with a young university that’s vigorous in outlook, so I accepted the job for 12 months and I’m still here.’

At ITC Howard has attracted federal grants for major projects such as the microwave-aided thermal processing of coals for industrial purposes, and microwave-retorted oil shale, which both have potential economic, technical and environmental benefits.

His current baby is EnvIRONment - an exciting and financially viable recycling smelting process using sewage sludge and steelworks dust to produce marketable foundry iron and pigment zinc oxide. Development has been supported by the Water Board, Pacific Power and BHP. It has the potential to revolutionise treatment of industrial and hazardous wastes both in Australia and overseas.

Howard is also retained by MoIten Metals Technology Inc of the USA to work on environmental and novel recycling projects. MMT flew him to the USA three times last year after trying to entice him to move permanently to Massachusetts.

Howard’s outstanding record has been recognised and acclaimed in the awarding of the highest university and professional honours. A doctor of science at the age of 28, he also holds honorary doctorates from the Universities of Melbourne, Newcastle and Wollongong, and is a Fellow of the Australian Academy of Science and of many other academies and institutes. Howard was also awarded a CBE several years ago.

The Worner brothers - Howard, Hill and Neil, a civil engineer who was Sir William Hudson’s right-hand man on the Snowy Mountains Hydro-electric Scheme - are all Honorary Fellows of the Institution of Engineers, Australia, a remarkable achievement for three men who were raised on a remote farm in Victoria’s Mallee District, before drought and depression forced their parents off the land.

‘Our one and only expectation was to be farmers but lack of water led us to leave the farm,’ says Howard. ‘We moved to Bendigo and went to a technical school thinking we would become better farmers if we did carpentry and welding.’ Teachers soon noticed their natural ability, however, and the boys won scholarships to the Bendigo School of Mines and then to Melbourne University, each of them subsequently going on to carve an illustrious career away from the land.

In Howard’s case, that included spending the war years designing artificial limbs for returned servicemen and pioneering the development of prosthetic devices. ‘I used to design and fit ears, noses and chins,’ he says. ‘It was a traumatic experience, but rewarding.’

‘If I were asked what contributing factor has made my life so rewarding and satisfying, it has been that opportunity to keep on expanding my mind, thinking about new challenges.

‘I have had the disappointment of inventing several things which have been ahead of their time, but I’ve also had the satisfaction of seeing parts of those inventions being picked up by other countries and developed with various components of my ideas built into new technology.’

Howard Worner is an exceptional scientist and human being, a gentle man of rare, questing intelligence and indomitable persistence. He retains a youthful joy in his work and in the pursuit of knowledge, and, 80 years young, he is still achieving.

Ruth Procter
BA 1984

Ruth spent her early years in Melbourne, moving to Newcastle at the age of 15 when her father, Howard Worner, became director of research for BHP.

After leaving school, she became a general primary teacher and then married Gordon Procter. They have lived in Newcastle, Sydney and Wollongong and have four children.

Whilst living in Newcastle Ruth completed a Diploma in Teaching and also undertook a counselling course with the Marriage Guidance Council (MGC) of NSW. For seven years she worked as a family therapist and education officer with the MGC in Newcastle.

Ruth says that when she came to live in Wollongong in 1978 she was excited by the multicultural character of the area. ‘This motivated me to study Italian at the University. My degree included Italian, Education and Women’s Studies.’

After completing a course in English as a Second Language, she taught with the Adult Migrant Education Service for two years. Since 1981 Ruth has been teaching ESL, English and Italian at St Mary’s College in Wollongong. She is also Year 9 Coordinator which, she says, brings me great satisfaction and enjoyment.

Ruth belongs to a number of community organisations reflecting her wide-ranging interests from environmental issues to cultural affairs. She believes the University is adding greatly to the growth, well-being and soul of our city.

Ruth was elected as Vice-President of the Alumni Association last year. ‘It is with honour and a sense of responsibility that I belong to the Board of Management of the Alumni Association,’ she says.
On Friday afternoons viewers tuning into the Special Broadcasting Service (SBS) can now see programs under the name ‘PAGE’ - Professional and Graduate Education. These programs are the result of nearly two years' planning by the University and SBS, which culminated this year with the establishment of the Wollongong Graduate Consortium.

This development has taken the tradition of learning by 'correspondence' into the technological era, bringing Wollongong to the forefront of distance education in postgraduate studies. The programs are the result of the University's initiative to use modern technology to expand the options for people to improve their skills and qualifications.

In 1991 John Anderson - profiled opposite - was asked to contribute to the development of technology-based education delivery at the University. Following discussions on campus, a proposal emerged to develop courses to be presented as televised lectures. It was decided that Wollongong would focus on postgraduate education.

In July the University and SBS signed an agreement officially creating the Wollongong Graduate Consortium. Subsequently 14 other Australian universities have joined the
Consortium, giving students access to an unprecedented pool of expertise.

The aim of the Consortium is to provide high-quality postgraduate and professional education to people whose attendance at a university may be restricted by problems of time and distance. By using the combined resources of SBS, the national television grid and high quality resource material, the Consortium is able to deliver into their homes or offices the resources they need to develop their knowledge and skill, to meet the challenges an increasingly internationalised economy is placing upon us all.

This is not 'Open Learning' in the contemporary sense. Entry prerequisites must be met before students can enrol formally in a course. Although it is possible to participate, for reduced fees, on a 'materials only' basis, such students do not submit assignments, sit for exams or gain credit. Students graduate with a qualification from the institution offering the course and will be subject to the entry and progression requirements of that institution. One of the founding principals of the Consortium is maximum cross accreditation and mutual recognition for credit purposes.

At the signing of the agreement, Vice-Chancellor Professor Ken McKinnon stated that the students the Consortium planned to reach were at graduate or professional level. 'We are confident that their knowledge and skills can be brought forward to what by world standards are the leading edges of modern industrial, commercial and professional requirements. We will thus not only assist them in advancing their professional careers, but at the same time enhance their capacity to contribute to Australia's economic revitalisation.'

Mr Malcolm Long, managing director of SBS, believes that the Consortium will also have the potential to develop into international markets, as it has already attracted interest from universities in Singapore and New Zealand. 'There are also opportunities, I think, for us to become a kind of hub in our region. There is great potential for us to develop regional programs.'

In previously unused SBS airtime, scripted lectures are televised to students around the country. This format allows for the introduction of guest lecturers, discussion groups and interviews with the top expertise in each field. The courses have been developed by the University and production staff from SBS to create lectures appropriate for TV. These lectures are supplemented by printed material sent to each student.

The first three subjects to air - telecommunications engineering, total quality management and health management - created considerable interest and generated over 1,000 enquiries. Planning is under way for these courses to be joined in 1994 with courses in the fields of telecommunications engineering, journalism and multicultural studies from Wollongong, as well as courses from other members of the Consortium. There is no need for students to attend the University itself at any time, as exams can be taken at locations around the country.

In addition to televised lectures, John Anderson, Executive Director of the Consortium, stresses that in the future it will develop a multimedia approach to providing education. 'TV is the focus at the moment, but traditional materials have a continuing importance. TV is only one component of a full array of methods. Such methods range from the provision of video tapes, video conferencing and pay TV. In addition to graduate courses, short courses for professionals are also being developed,' he says. 'These will enable busy professional people to upgrade their skills and knowledge to the latest international standards.'

By providing this new form of postgraduate education, John believes the Consortium will enhance the University's reputation as well as meeting an educational need. 'It can help position the University for the future, through involvement with developing technologies. It is also likely to have an overall impact on standards of teaching at the University generally, as preparing and presenting material for television makes lecturers think more about what they are teaching and the way it is taught.'

The project was initially supported by a grant from the Department of Employment, Education and Training. Courses are offered on a fee-for-subject basis ranging from $1200 to $1500 each. The Consortium is based in the new Communications Centre (formerly the Pentagon Building), where programs for air will also be produced. Since November last year the building has been undergoing major remodelling, to provide studio space and to update lecture theatres with the latest educational technology.
National Reference Centre

National Centre for Primary Health Care Workers

Last year the University of Wollongong became home to a national assistance centre for primary health care workers throughout Australia.

The National Reference Centre for Continuing Education in Primary Health Care is an information resource centre that was established to help those interested in furthering their education in primary health.

A proposal for the Centre was made by an alliance of the University of Wollongong, Healthy Cities Wollongong and Canberra, the Illawarra Area Health Service, the South-Western Sydney Metropolitan Area Health Service and the University of NSW Department of Community Medicine.

In April 1992 the Minister for Health, Housing and Community Services, Mr Brian Howe, announced during a visit to the University that the proposal had been successful, and that the Centre was to be established at the University of Wollongong in the Faculty of Health and Behavioural Sciences.

Last November Sue Kirby, formerly Executive Director of Community Health and Health Services Development for ACT Health, was appointed Director of the Centre, and to Associate Professor in the Department of Public Health and Nutrition.

The new premises of the Centre, at Healthshare House, 59 Northfields Avenue, were officially opened by the Hon. Stephen Martin, member for Cunningham and Speaker of the House of Representatives, on June 1 this year. He described the Centre as evidence of Wollongong's 'increasing status as one of Australia's leading universities. The fact the Centre is located in Wollongong is of significant benefit to the region.'

Primary health care services usually provide the first point of contact with the health care system, and include general practitioners, nurses and allied health practitioners such as physiotherapists, social workers and community health workers. As the health system increasingly focuses on multidisciplinary skills, the need for further education in multidisciplinary team building for this group is growing. In Australia, however, there are few continuing education programs available to the primary health care workforce, and providing for the education needs of this group has increasingly become a problem.

The aim of the Centre is to act as an information base from which primary health care workers can find out about available courses and programs in their fields. Standards are also being developed for education programs, in consultation with both providers and users, to ensure that the value of continuing education is recognised.

The National Reference Centre is also to play a role in stressing the need for developing primary health care services, which are used by the community more than hospital-based acute services.

The Centre, funded by the Commonwealth National Better Health Program, is to be trialled for two years, with the project's success to determine whether further funding will be given.

The Hon Stephen Martin cuts the ribbon to open the National Reference Centre at the University. With him are (left) Professor Christine Ewan, Dean of the Faculty of Health and Behavioural Sciences, and Associate Professor Sue Kirby, the Centre's Director.
Recently appointed Officer of the Order of Australia, Professor Clem Lloyd, Head of the Graduate School of Journalism, is teaching in a field where technology and education are reshaping the traditions of the print media.

Born in Wagga, after completing his leaving certificate Clem's first job in the media was the beginning of ten years in print journalism in Sydney. In 1956 he secured a cadetship at the Mirror, and after a three year apprenticeship he received his grading at the Sun. His career in Sydney included working for trade papers, as editor for the 'Weekend' and as sub-editor of the Financial Review.

In his mid-twenties, Clem's political leanings brought him to Canberra as political staff officer, and later press secretary, for the Australian Labor Party, working for the Whitlam government and later for Bill Hayden. Continuing to work freelance, through his interests in urban policy he became involved in research with the Institute for Applied Research in Social Sciences at ANU. As a research assistant and a student he completed a masters degree and then a PhD.

Balancing the roles of researcher and press secretary, Clem remained with the Labor Party until the 1980 election, when his interest in politics gave way to a growing involvement in policy research. He became a full-time academic at ANU, working in public policy and urban history.

In 1990 chairs in journalism were first established at Australian universities - at the University of Queensland and at Wollongong. By Easter, Clem was appointed Professor and Head of the newly-created University of Wollongong Graduate School of Journalism.

He arrived to find 'nothing, only an entry in the calendar - which I had had nothing to do with.' From these scant beginnings, the School has graduated 30 students with 60 currently enrolled. Many students are themselves teachers of journalism looking to improve their qualifications. Courses are also in high demand from local journalists, although Clem believes the School has now 'filled the local market. The student growth area is from central Sydney,' he says. Plans are being made as to how best to provide for these potential students, one option being through use of the University Centre in Sydney.

Clem believes that the media industry is becoming more receptive to academically-trained journalists. 'Although they were not traditionally accepted, and these attitudes still persist, many are now taken on as graduate cadets. Because universities have a range of facilities, technologies and scope for innovation, they can also offer better training.'

Technological changes are also forcing journalists into new modes of presentation. 'There will always be a role for journalists as compilers, gatherers of information,' says Clem, 'but the method of delivery will change. We are now looking towards an era where this change will happen, and we have to adapt and adjust courses to this.' In response, the School offers the only multi-media journalism course in Australia, and is preparing for inclusion in the Wollongong Graduate Consortium, the first lectures planned to air March 1994.

In addition to occasional freelance work, Clem continues his involvement in policy research whilst still a Visiting Fellow of ANU, 'which means I'm not paid,' he adds. The School's commitments to the Wollongong Graduate Consortium mean that his trips to Canberra are now rare.

Clem's award as an Officer of the Order of Australia for contributions to his various fields was an honour he was not expecting. 'I was surprised - and amazed - when I read the citation,' he says. 'Services to journalism, politics, public policy - everything. Too much'
Harry Goodhew, previously Bishop of Wollongong, became Archbishop of Sydney in April 1993. He was awarded an Honorary Doctor of Letters on 7 October for his high achievements as a community leader, his scholarship and his contribution to the University of Wollongong.

Just as the roles of the church and universities have been intertwined through the centuries, so have the paths of Sydney's Archbishop Harry Goodhew and the University of Wollongong.

In his role for the last 11 years as Bishop of Wollongong, Richard Henry Goodhew has officiated at numerous graduation ceremonies. He has also graduated from the University with an honours masters degree in history and politics, and recently he was instrumental in establishing an Anglican residential college in Keira Street where students can live and study in a Christian atmosphere.

The Archbishop's studies at Wollongong have coloured his distinctive yet gentle leadership style. For his thesis he explored the role of leadership at local church level, discovering that leadership style was the major factor determining the nature of congregations, above and beyond other factors such as population level or economic circumstances.

'I have had to reflect with an academic edge on the nature of Christian leadership'

'It's been very helpful to me because it's meant that I've been able to carry that across in my work with local churches and I've had to reflect with an academic edge on the nature of Christian leadership,' he says. 'There's an element in Christian understanding of leadership - we call it servant leadership - which has nothing to do with traditional status. It's the empowering of people to develop their gifts and permitting them a stake in whatever the issue is, or whatever the organisation is trying to do.'

Harry Goodhew has completed two years of his doctorate at Macquarie University but has had to put this on hold while he takes up his new position.

The Sydney Diocese is Australia's oldest. Today it still covers a huge area from Broken Bay in the north, Lithgow in the west, Tallong near Moss Vale in the Southern Highlands and Burrill Lake near Ulladulla on the south coast. The diocese is home to 60,000 regular churchgoers.

Harry Goodhew has a reputation as a parish builder. Apart from presiding over the Synod, planning a strategy for the...
diocese and his other 'bureaucratic' duties, he hopes to work as much as possible at grassroots level.

'My own philosophy is that the Archbishop needs to be out and about amongst people. So I'll be spending a lot of my time visiting parishes, lay people and clergy from various regions,' he says. 'I feel a sense of responsibility to the community and I'm anxious to bring the influence of the office to try to achieve good things for people.'

Archbishop Goodhew started his working life as an accountant at the age of 15 before taking a job as a church youth worker. 'I'd always felt I wanted to move in this direction,' he says. So he then attended Moore Theological College and studied Hebrew at Queensland University.

After he was ordained he spent a year at North Bondi and then six years at Beverly Hills in Sydney. Then followed three years as a bush pastor ministering to people in railway camps, homesteads and two hospitals serviced by the flying doctor service.

'I feel a sense of responsibility to the community and I'm anxious to bring the influence of the office to try to achieve good things for people.'

He spent three years with the Bush Church Aid Society based in Ceduna, South Australia, and covering an area of over 200,000 square kilometres. He enjoyed it because 'I learnt that Christian ministry is a one-to-one job.'

Then he and his family returned to city life, to Sydney and then to Brisbane, and in 1976 they came to Wollongong. Harry Goodhew served as rector, then archdeacon and finally Bishop.

After 17 years in Wollongong he says what he misses most is 'that lovely escarpment. For years I've been jogging at the back of the mountain and up and down the beaches.'

On the direction that the University has taken, Archbishop Goodhew says 'I think it's done a super job. But I don't see a university as only in terms of providing people with the means of getting jobs.

'I'd always want to encourage universities to remember their religious origins and that religious issues, great issues of meaning, should always be part of the intellectual life of universities - I'd like to nudge that along a little bit'.
KATHY ROZMETA

GDipCom 1990, MBA 1993

Kathy Rozmeta is currently Chief Manager, Training and Development for the ANZ Banking Group. In this position she has responsibility for the work-based learning of over 40,000 staff in 42 countries in disciplines ranging from leadership, credit, computer systems and marketing for staff from executive level to part-time tellers.

Kathy joined ANZ almost five years ago as National Manager for Management Training and after two years was tempted away from her idyllic surroundings at Stanwell Park to join senior management in Melbourne. She says it's been very rewarding working for a company willing to innovate and reward performance.

Kathy is both a graduate and former staff member of the University of Wollongong. She produced the first Equal Employment Opportunity Management Plan in 1986 and remembers her three years at the University most fondly. She is still involved in University affairs as a new member of the Faculty of Commerce Visiting Committee.

Whilst working at the University Kathy began her MBA and despite many delays - her son Sean was due the same day as the marketing and accounting assignments - she won the Management Consultants Institute of Australia's Award as the New South Wales MBA Graduate of the Year in 1991, competing against candidates from all universities in NSW.

Prior to her stint at this University, Kathy's career spanned a variety of experiences. Leaving school at fifteen (two years younger than her classmates), she worked for a year in an office but was persuaded by a mentor to take up a teacher's scholarship and 'better herself'. She has never forgotten how important such encouragement is and says, 'that's one of the best things about seniority in management (apart from a parking spot) - that you can help so many other people overcome barriers to their potential.'

Kathy became a teacher at Berkeley and then Wollongong High and was later a Teacher Education Adviser at Sydney University where she completed a masters degree in education on a part-time basis.

What followed were six years with the Department of Consumer Affairs, which involved her in 'straight' educational work but also opened up a new world of daily contact with the media. Her love of writing and drama blossomed and have stayed with her ever since.

Her first video production for ANZ in 1991 won Best Management video released in Australia against international competition. Her second was highly commended. Both were scripted and produced by Kathy.

It is ironic that as a child growing up in inner city Glebe (neither of her parents finished high school), and within a stone’s throw of Sydney University, there was never any talk of Kathy going to university. Her parents pushed for 'a good job in an office', and thankfully for them, she certainly has that.
It is obvious that cows are much larger than mice, but not so obvious that mice are much more metabolically active than cows.

Patrice Couture, a Canadian from Quebec, has just completed studies for his PhD at Wollongong in which he examined the cellular basis of body size-related variation in metabolism, investigating rats, rabbits and sheep as well as mice and cattle.

Although a cow is about 20,000 times the size of a mouse, the latter consumes about 13 times the amount of oxygen (on a weight basis) than the cow. Whilst half of this difference is due to the relative size of the internal organs, the rest is due to particular cellular characteristics.

Patrice showed that a gram of mouse liver consumes about seven times the oxygen used by a gram of cattle liver, and values for all the other species were intermediate. He believes this may be related to the different composition of cell membranes in species of different sizes.
Enduring ties with Wollongong City Council

Links With City Hall

There has always been a strong relationship between the City of Wollongong and the University and today the association is still flourishing.

Of the fifteen councillors who comprise the present Wollongong City Council, at least half have regular contact with the University of Wollongong.

The Lord Mayor, Cr David Campbell, chairs the Friends of the University and is frequently present at University functions, and Rod Oxley, the General Manager, is a member of the University Council. Cr Vicki King is currently enrolled and Cr Stuart Watkins is employed as Workshop Supervisor in the Department of Mechanical Engineering.

Four of the councillors are Wollongong graduates and are profiled below. Two are undertaking further studies at Wollongong and two are members of Faculty Visiting Committees, so all are still very much in touch with the campus.

Kerrie Christian
BMet 1978

Kerrie attended Bulli High School before entering the then Wollongong University College to study metallurgy in 1973. She graduated from the University of Wollongong in 1978 with a Bachelor of Metallurgy, having been awarded the 1977 Australasian Institute of Mining & Metallurgy prize for metallurgy.

In 1974 Kerrie joined BHP Steel (Slab and Plate Products Division) as a trainee and progressed to a metallurgist position on graduation. She currently holds the position of Senior Materials Engineer and specialises in the field of engineering failure analysis and materials degradation.

Kerrie has retained her contacts with the University through the Engineering Chapter of the Alumni Association and her membership of two advisory Visiting Committees - the Faculty of Engineering and the Faculty of Education. She has also played an active role in the 1992 and 1993 Girls in Engineering Summer School Program.

She says she is only too happy to be able to contribute something back to the University. She adds, 'Even when I enrolled in 1973 the faculty staff were very supportive of females in this 'non-traditional' area.' She remembers being one of just three women in a class of about a hundred people. 'I'm particularly encouraged now to see a high female enrolment in the University's environmental engineering course.'

In the mid 1980s Kerrie became NSW President of the small white collar union, the Association of Professional Scientists of Australia, and was actively involved in the amalgamation process which led to the formation of the larger Association of Professional Engineers and Scientists of Australia. She is Scientists' Branch delegate to the South Coast Labour Council and on its Executive.

Kerrie has been involved in environmental issues in the Illawarra for several years, ultimately being elected to Council in 1991 as a member of the Active Community Team. She served for two years on Council's Executive Committee, chairing the Development and Planning Committee, and also the Works and Technical Services Committee. She is also a member of the Board of a number of local organisations.

Kerrie says her degree has assisted her far beyond the needs of her engineering position at BHP. 'My background in science and technology has been invaluable in my work for Council.'

Jo Flynn
BA 1985

When she was seventeen Jo received a BA/DipEd scholarship to Macquarie University. From a large family, she 'hated the lonely life' she found at university, and after a year and a half left to begin on-the-job training in nursing at St Vincent's Hospital in Sydney. She then worked for 10 years in a profession that 'prepares you for
anything. Everything is easy compared to nursing.'

Moving to Wollongong with her husband and family, Jo worked for TAFE where she developed a curriculum for teaching independent living skills for the intellectually disabled. She also instructed in theatre technique at Wollongong Hospital. At this time Jo rediscovered an interest in further study, and enrolled as an undergraduate studying human geography at the University.

Community involvement has always been a part of her life. Beginning with participation in pre-school committees for her children, in the Illawarra she has chaired the joint Regional Apprenticeship and Workskill Committee, which she later split into separate groups. Currently she is chair of Workskill which organises workskill competitions. She is also a member of the recently-formed Visiting Committee of the University’s Faculty of Education, a committee initiated to provide community input into courses.

In 1991 she was elected to Council. ‘It was a most humbling experience - but it was great,’ she says. ‘I am interested in how communities work; the ability of communities to get things done is awesome. My role is to help by cutting through red tape, and dealing with things sensitively and diplomatically.’ She sees her degree as providing a necessary background to this role. ‘It has given me an understanding of communities. By default I chose the right degree.’

Her current position, as Manager of the Labour Market Program at TAFE, presents the challenge of developing and running a range of courses for the needs of the unemployed. ‘It’s all about trying to build people’s skills to fit into a restructured industry. The only rule in this place is that the students are the most important element,’ she says. ‘You do all you can to assist them in achieving their goals.’

Jo adds that it is the same in Council. ‘Your role is to attack issues, not people.’

Tracey Iskra
BCom 1993

Tracey was elected to the Wollongong City Council at the age of nineteen. Her ties to the University were well established. She was completing a degree in commerce with a double specialisation in business systems analysis and management. After graduating she elected to continue her tertiary education at Wollongong University and is currently studying for her graduate law degree.

Tracey sees the University as a progressive institution with international links well suited to our multicultural region. She is pleased it has become an invaluable resource for local industry and commerce to draw upon. ‘By striving to forge links with the business community, the University will ensure it is providing commercially relevant skills and expertise to the market, diversity - Wollongong hasn’t enough choice for what people need; environmental improvement, such as green corridors and rehabilitation of waste areas; and improving the budget, to achieve financial stability’.

Michael Samaras
BA(Hons) 1986

Michael began his BA at Wollongong University in 1982. Majoring in history and sociology, Uni life provided ‘a self-indulgent personal interest. It was lots of fun,’ he says. ‘But it’s also very satisfying: you do get something out of it.’

He graduated with honours in 1986, and started work for Stewart West who was then member for Cunningham. Politically active since high school, and a member of the Labor Party, Michael can’t remember when politics first became part of his life. ‘I’ve always been involved in politics. Stewart was an honest politician, very good to work for; as his Electorate Officer, my role was all-purpose - you do everything.’

When Stewart West retired in 1993, Michael returned to full-time study, a decision partly motivated by a desire to spend more time concentrating on his work for Council.

Elected in September 1991, Michael is the only party-aligned councillor of our four graduates (the other three are independent). He believes there are currently three areas of need in the Wollongong community: ‘Housing diversity - Wollongong hasn’t enough choice for what people need; environmental improvement, such as green corridors and rehabilitation of waste areas; and improving the budget, to achieve financial stability’.
The first Alumni Association reunion was held this year on Open Day, Sunday 29 August, for graduates from the University's early years: 1962-1979. They were invited to return to the campus on a day that is traditionally packed with a wide range of activities.

Although the response was not huge, the 30 or so alumni who attended, some with their families, appeared to enjoy the day thoroughly. Of particular interest were the morning campus tours - indeed, you would not have to be one of the early alumni to see enormous changes in both buildings and landscaping.

The Vice-Chancellor, Professor Ken McKinnon and Wollongong Lord Mayor, Councillor David Campbell gave a warm welcome to everyone, before a video highlighting some of the recent developments at the University was shown. The ensuing seafood barbecue and sausage sizzle in the Union Tavern was a great success, and after time to explore the campus and Open Day activities, some of the alumni returned for afternoon tea and a chat before leaving.

Keith Phipps (left), President of the Alumni Association, cooking the seafood barbecue. With him are William Thomson (BCom 1973) and his wife Helen and daughter Elizabeth.

**Fond Memories And Lasting Friendships**

Dorothy Ferry BSc 1969

In 1966 Dorothy Megasari Lesmana, now Dorothy Ferry, arrived in Wollongong from Indonesia at the age of 18. She stayed with her aunt at first and was supposed to go to school here, even though she had completed one year of university in her home country.

Instead she was admitted on a trial basis to the then Wollongong University College as a ‘provisionally matriculated’ student, ‘thanks to the efforts by the University and other parties involved,’ she says. Her success (she passed the requirements of the provisional matriculation with high distinction) opened the way
Alumni profiles

for other overseas students to attend university in Australia on the same basis.

'Being the first Asian student at the campus,' Dorothy recalls, 'I had the privilege of having much encouragement and help from students and staff alike.' She was a pioneer in other ways too, by enrolling as probably the first female student in engineering. She decided to complete a BSc at Wollongong before continuing her studies in engineering at the Kensington campus.

Dorothy describes the Wollongong campus as having only a few buildings then. 'The Administration and Science were in one building, with the library downstairs. All the Engineering schools were in another building with an extension for the workshop. Chemistry, Mathematics and Metallurgy were together in another building and the Union was separate, near two large fig trees where we often had picnic lunches.

'In the distance at the foothill of Mt Keira was the Teachers' College. My graduation in 1969 was held outdoors under a pergola at the steps. It was a very special day for me.'

One of Dorothy's most vivid impressions is how 'small and cosy' the University was then. 'Nearly everyone knew each other,' she says. 'There was a close relationship between the staff and the students.

'The highlights of my time at Wollongong University College were the royal visit by the Queen and her family in 1968, and the bushfire on Mt Keira the same year. We had to abandon our lectures to help the Teachers' College staff and students put out the fire, which had spread down the foothills towards the College building - that day was called 'Black Friday'.

'It brought back sweet memories when I visited the campus for the recent alumni reunion,' Dorothy adds. 'I must admit I was rather disappointed that there were not more people, especially alumni from 1969.'

After leaving Wollongong, Dorothy completed a bachelors and then a masters degree in engineering at the University of New South Wales. Firmly believing that the confidence and skills she had acquired through her studies could be transported to different disciplines, she began working at the then Department of Main Roads.

Many years later Dorothy is still employed at the Roads and Traffic Authority in Sydney and is currently with the Traffic Data Group, which surveys and collects traffic data as well as setting up standards and procedures for surveys. She says her main role is the maintenance of Sydney travel time data, which is used in monitoring the Sydney transport network, evaluation of a new traffic management scheme and strategic planning for the Sydney region in the future.

Liliani Gulati BSc 1970 MSc 1975
Jenny Howell BE 1975
Elly Wignell BCom 1975

A year after Dorothy came to Wollongong, her school friend from Indonesia, Liliani Fatima Halimah, now Liliani Gulati, joined her at Wollongong University College.

Liliani completed a BSc in 1970 and stayed in Wollongong to do her masters degree in operations research, graduating in 1975. During this time she met up with two sisters from Indonesia: Cho Tjen Lie, now Jenny Howell, and, a year later, Elly Gomulija, now Elly Wignell. The three girls cemented their friendship by sharing a flat whilst studying, and of course Jenny and Elly also became friends with Dorothy through Liliani.

Today, like Dorothy, the three of them work in highly responsible jobs. Liliani is a system programmer with BHP Information Technology at Warrawong, where her responsibilities include the installation of operating systems software and layered software, dealing with any problems encountered with the Digital Equipment System software, and maintaining hardware and software configurations and inventories.

Since graduating in 1975, Jenny has been employed as a civil engineer with the NSW Department of Water Resources (previously the Water Conservation and Irrigation Commission). She has worked in various areas including investigations and planning, project development and irrigation systems. Her current position is in the Dam Safety and Refurbishment Unit, where she is involved in evaluation and analysis of dam break and flood.

Elly also works in Sydney as a financial accountant for TV station Channel 9, which involves all aspects of financial planning and management. She is assisted by a staff of five.

Friends for over eighteen years, from left: Elly Wignell (BCom 1975), Dorothy Ferry (BSc 1969), Liliani Gulati (BSc 1970, MSc 1975) and Jenny Howell (BE 1975)
CHAPTER

ACTIVITIES

Any alumni interested in becoming involved in a chapter group, either new or existing, are welcome to contact the Alumni Office. Some recent chapter activities are outlined below.

CAMPUS ALUMNI

This group, previously known as the Graduates Group within the Friends of the University, has now become a chapter of the Alumni Association.

The main ongoing activity of the Campus Alumni is the Bookshop and Gallery, which is located at Campus East (opposite the Science Centre) and is open from 1-5pm on the fourth weekend of every month. The Bookshop also had a presence on the main campus on Open Day at the end of August and this attracted a steady stream of visitors.

The Bookshop has expanded so much in the three years since its inception that it has outgrown its original small space and now occupies the major part of the building in order to house its ever-growing collection. Staffed entirely by members of the Campus Chapter, all funds raised are put towards book scholarships for honours students.

The Bookshop and Gallery is well worth a visit if you enjoy books of any sort, and should you wish to become involved more helpers are always welcome. Furthermore, if you have any books you no longer need, what better way of recycling them?

COMMERCE ALUMNI

The Faculty of Commerce has recently appointed Belinda Schuster as External Relations Officer, a role which covers all aspects of public relations including contact with alumni from that faculty.

One of Belinda’s first tasks was to invite alumni to a farewell for Associate Professor John Steinke, retiring Dean of the Commerce Faculty. Appointed as a lecturer initially part of the University of New South Wales and it was their vision to keep us as a feeder, and so starved us of resources,’ he says. ‘That was not acceptable for the people working at the University or for the community.

‘When I first came here the University was the size of a small high school, but I saw the city had considerable potential and the University could be a substantial institution. But I never envisaged the growth which has occurred. The University has an enormous impact on the whole of the city - its economy, culture, everything. I am very pleased to have been a part of that.’

Although he has retired from the Faculty, John intends to maintain to the then Wollongong University College in 1964, John has been a driving force in making the University one of the most progressive in the country.

He was instrumental in designing much of the University’s layout and he has established a strong Commerce Faculty which is flourishing, especially in its international programs and research areas. He says he hopes also to be remembered for his involvement in the University’s push for autonomy, which came to fruition in 1975.

‘Wollongong University was

Campus Alumni members, from left: Mollie Makin (BA 1989), Marjory Macdonald (BA 1986) and Wilma Furlonger (BA 1984, DipPsych 1986) with some of the hundreds of books available at the Bookshop and Gallery at Campus East (Picture courtesy of The Illawarra Mercury).
a close association with the University through part-time work with the Illawarra Technology Corporation.

At the farewell function in mid-August, John was presented with Honorary Life Membership of the Alumni Association in acknowledgment of his contribution to the University as a whole, and in particular his support for the development of the Commerce Alumni.

EDUCATION CHAPTER
Although this chapter is not yet formalised, a steering committee chaired by Allan Petersen (G Dip Ed Stud 1982, M Ed 1990) meets regularly. Planning is well under way for a major reunion of education alumni next March, to coincide with the official launch of the Education Chapter.

The venue for this function will be the Keira View Building, currently nearing completion, which from next year will be the new home of the Education Faculty. Keira View, also to house the Law Faculty, is located at the western end of the campus between the Administration Building and the old Institute building - it's an impressive sight.

So if you are a former student or staff member of the Faculty of Education (or of the former Wollongong Institute of Education/Wollongong Teachers' College), make a note to keep Saturday 19 March 1994 free after 6.00pm - this will be a great opportunity to meet old friends and see the campus as it is today.

A class reunion of Teachers' College alumni from 1968 is also being held from 21-23 January 1994. Details are available from the Alumni Office.

HONORARY CHAPTER
This Chapter comprises the Honorary Life Members of the Alumni Association, who are the Fellows of the University, Emeritus Professors and recipients of honorary degrees.

The inaugural meeting was held on 7 October, to coincide with the graduation ceremony held the same day. Ten members attended and they elected the following to the Executive: Convenor, Dr Brian Gillett; Deputy Convenors, the Hon Laurie Kelly and Mr Ted Tobin; Secretary/Treasurer, Captain John Bell.

Awards during the 1993 graduations have added six new members to the Chapter. In May, Professor Raymond Chambers AO was awarded a Doctor of Science and Mr Noel Diffey (formerly Secretary/Manager of the University Union) was made a Fellow of the University.

In October, the Most Rev Richard Henry Goodhew, Archbishop of Sydney (see page 10), was awarded a Doctor of Letters, and the Hon Justice Jane Mathews was awarded a Doctor of Laws.

In addition, Dr Sultan Aly and Mr Peter Kell were made Fellows of the University. In August the University Council also conferred the title of Emeritus Professor on Professor Lauchlan Chipman (see article on page 30).

Footnote: Professor Russell Linke, Dean of the Faculty of Education, has recently left Wollongong to take up a position as Deputy Vice-Chancellor at Flinders University in Adelaide.
Professor Linke's recent research, including publications for the federal government on performance indicators and institutional amalgamations in higher education, has accorded him national recognition as a leader in policy and planning for higher education.
Acclaim for award-winning opera

Award-Winning Film
By Schultz Duo

The film Black River, based on the acclaimed first opera by Wollongong University senior lecturer and composer Andrew Schultz, has recently been awarded the prestigious Grand Prix Opera Screen prize for 1993 in Paris. In a true family collaboration, Andrew’s sister Julianne wrote the libretto to Black River.

Based partly on the 1987 Human Rights Commission’s inquiry into race relations and aboriginal deaths in custody, Black River makes a dramatic, human statement about racial interaction in Australia today, and represents an unprecedented collaboration between black and white Australia in search of an artistic and musical statement that crosses political and social boundaries.

The film incorporates breathtaking Australian outback locations and draws upon some of Australia’s finest talents, including mezzo-soprano Maroochy Barambah and the Bangarra Dance Theatre.

The opera was first performed in Sydney in 1989 by the Sydney Metropolitan Opera Company, and the film had its premiere in Melbourne in July this year. In its original stage version the opera was awarded the Australian National Composers Opera Award and a National Critics Award for Best Production, and attracted critical acclaim. The opera broke new ground by giving a significant part to an Aboriginal - the first such role.

The film adaptation of Black River is the only Australian independent production to be selected for the biennial festival, Opera Screen, and it faced competition from more than 140 screen adaptations of opera from all over the world, including productions from the Royal Opera, London, Vienna State Opera and New York’s Metropolitan Opera.

Opera Screen is an international festival and competition for audiovisual opera and music theatre productions which takes place every two years and enables people to see the best of international opera films.

The Grand Prix Opera Screen is a special prize awarded to the production which best epitomises the spirit of the festival, which is to encourage the production and dissemination of opera and music theatre, to stimulate dialogue between those involved in this creative area, to popularise opera and music theatre and to inspire new concepts of visual production for television.

Although he was unable to attend the Melbourne screening of Black River, Andrew Schultz vowed he would be present at the international film premiere in Paris in late August. He returned
Acclaim for award-winning opera to Wollongong a few days later, still elated by the award. Commenting on the win, he said that it was a ‘lovely feeling, particularly because the piece has had so many critics over the years as the subject matter is so confronting.’

Andrew, a senior lecturer in the School of Creative Arts, is known as one of Australia’s most prolific young composers and has been the recipient of various awards and scholarships. He has studied extensively in Australia, Britain and the United States and has composed for a diversity of media, including chamber, orchestral and vocal works.

Born in Adelaide, Andrew began composing while at secondary school in Brisbane and he says his own musical roots are in Queensland. By the age of 15 he knew music would be his life. ‘I realised then that this was it – that music could take over my life so much,’ he says. ‘It was incredibly satisfying.’

Andrew’s sister, Julianne, who wrote the words for Black River, is well known in Wollongong as the author of Steel City Blues, written in the 1980s after the downturn of the steel industry.

Until recently Professor of Journalism at the University of Technology, Sydney, she is currently working at the Australian National University in the Research School of Social Sciences.

Gala screenings of Black River were held in October at the Playhouse Theatre at the Sydney Opera House in the presence of various federal politicians and cabinet ministers and the NSW Deputy Premier. The film is a co-production of Film Australia, Swedish TV and the BBC and was made in Sydney with a budget of $1 million by Lucas Produktion.

Since completing Black River, Andrew and Julianne have been working on a new opera called Going into Shadows. This opera is a love story set in London, which focuses on betrayal and explores contemporary moral dilemmas.

THE ANNUAL GENERAL MEETING OF THE UNIVERSITY OF WOLLONGONG ALUMNI ASSOCIATION INC will be held on Saturday 26 February 1994 6.30 - 7.30pm in the Kemira Room University of Wollongong Union

PLEASE COME ALONG AND HAVE A SAY!

Light refreshments will be provided and parking will be available in either the Union carpark or the multistorey adjacent to the Union Building.

(NOTE: Only alumni who are Financial Members of the Association are eligible to vote at the AGM)
Soldiering, geopolitics and trade have been the three main areas linking regions and nations from time immemorial. Soldiering dominated as an instrument in medieval times. Geopolitics moved to centre stage during the nineteenth century, and is now being replaced by trade.

The unprecedented growth of output and productivity among the nations of Europe, Asia, North America and Oceania since the Second World War has mainly been facilitated by trade among independent nations cooperating and trading in pursuit of their self interest.

Adam Smith, guru of modern economics, wrote a book in 1776 entitled An Inquiry into Nature and Causes of Wealth of Nations. His ideas continue to influence the thinking of economists and policy makers. According to Smith, specialisation is the key to improved efficiency and technical progress. This division of labour is limited by the extent of the market. Expansion of the market, however, creates opportunities for greater specialisation, which results in output and productivity growth through investment and technical change.

In recent decades, the volume of $13.3$ billion which represents about 20 per cent of her total exports. The Asian share is about 40 per cent and rising fast.

A major component of export of services to Asia, apart from tourism, is education. This component has undergone a sea change during the last 5-6 years.

Dawkins' reform of the Australian university system in 1988, among other changes, opened the Australian universities to full fee paying overseas students. The number of Asian students coming to Australia has been rising ever since, as is clear from the table on the page opposite.

The total number of overseas students at Australian universities has increased from 16,782 in 1986 to 39,490 in 1992. More than three quarters of these students are from Asia.

As part of his MCom (Hons) thesis in Wollongong's Department of Economics, Darren McKay has estimated, using input/output...
Growth in export of education and gold

Tables, that these students, apart from directly paying an annual fee of about $10,000 per annum, spend another $15,000 per year generating a total income of about $5.8 billion in Australia the education sector surely but imperceptibly.

Another major link emerging is the export of gold to Asia. In 1992 the value of gold export to Asia was $4 billion - the only other commodity which earns higher revenue is coal. Singapore, Japan and Hong Kong have virtually replaced Switzerland and Italy as destinations of most of Australia's gold exports. Japan alone imports 360 tons of gold annually while Australia's total output of gold is only 245 tons!

The Asians' love for learning and gold is deep rooted and has been valued above everything else. It is considered the best hedge against political, social and economic uncertainty.

Per capita consumption of gold in Singapore, according to World Gold Council estimates, is 0.25 ounce a year, whereas it is only 0.07 ounce in Italy and 0.03 ounce in USA. With increasing prosperity in Thailand, Indonesia, China and South Korea, demand for gold in Asia will continue to rise even faster than education, tourism, other services and merchandise.

The Asians' love for learning and gold is deep rooted and has been acquired by centuries of experience of successive generations. The common reference to the educated elite as 'mandarins' is apt. Because of its embodied nature and usefulness across countries, education is

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<th>University of Wollongong</th>
<th>Total Australian universities</th>
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<td>Australian Government subsidised students</td>
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<td><strong>Total</strong></td>
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The table above shows the growth in the number of overseas students studying at Australian universities (Source: McKay, Darren "An input/output analysis of overseas students studying at Australian universities"; a paper from Economists Conference, Perth, September 1993).

(when multiplier effects are also included) and about 33,000 to 37,000 additional jobs. These are direct, measurable, immediate economic benefits.

The social and cultural benefits of such encounters are high and are of lasting value. Educational encounters between Australian and Asian students in the classroom, library, laboratory and on campus have challenged the insular, inward-looking psychology of Australians. The results are gratifying in terms of educational experience for all participants.

Soon the reverse movement of Australians going to Asian universities to study languages, history and philosophy, which at the moment is a trickle, will become a stream. Australian appreciation of old Asian cultures, traditions and accumulated wisdom is just beginning to be noticeable in the media and books published here. The extremely high value that Asians place on learning and knowledge has challenged the common Australian suspicion of elitism. The outcome will affect
The University of Wollongong has become the first Australian university to establish a campus in the Gulf - and the first in the world to provide an external education institution in the United Arab Emirates.

In response to the perceived local need for external tertiary education in the United Arab Emirates, the Illawarra Technology Corporation has developed and funded the creation of a campus in Dubai: the Institute for Australian Studies (IAS). The high numbers of expatriates in Dubai (up to 80% of residents) interested in further study, and the eagerness of the UAE to lessen their reliance on non-nationals in the running of the economy, suggested that a western-style university campus would best fulfill a growing need.

According to Bill McGaw, Manager of ITC's International Division, the government, business and the local community in Dubai are positive about the creation of the campus, which provides students with affordable local education and allows them to begin tertiary studies without disrupting family links. "Dubai is an exciting market for the University of Wollongong's education services," he says. "We are also planning to expand into other parts of the Gulf region as part of Wollongong's international education policy."

The IAS began its first semester in July with a promising intake of 75 students, and offers the opportunity to work towards bachelor degrees in commerce and computer science, courses identical to those offered in Wollongong. From September, when a second enrolment of students took place, a Master of Business Administration was also offered, and by 1994 a Bachelor of Engineering will be available.

As all courses are presented in English, students who need help with language can enrol in a 12-week course in English for University Studies with the IAS; courses are also offered in Business English, English for Academic and HSC purposes, and English for Arab Speakers. A University orientation bridging course and a Foundation Studies Program are available to bring students up to entry level requirements. The IAS is equipped with a language laboratory as well as a computer laboratory, reference library, student common room and prayer room, staffed by locally-engaged lecturers.

The Institute's Director, Martin van Run, an academic coordinator seconded from Wollongong, sees the Institute's role for local students as introducing them to a different style of education. "They are especially made aware of the western world's education values, and the importance of performing well in assignments and exams."

The establishment of the IAS coincides with another link between the UAE and the University. Wollongong Vice-Chancellor, Professor Ken McKinnon, and the Vice-Chancellor of the United Arab Emirates Higher Colleges of Technology (HCTs) recently signed a Memorandum of Understanding, which will allow graduates of HCTs to convert their diplomas into bachelor degrees at Wollongong, and complete further study. They will then have the opportunity to return to take up teaching positions in the HCTs.
NEW PROFESSORS

The University's recent professorial appointments cover two Faculties: Health and Behavioural Sciences and Science.

LEN STORLIEN officially takes up his position as Professor and Head of the Department of Biomedical Science (previously Human Movement Science) in March 1994. At present he is visiting the University regularly in order to orientate himself to the Department and its activities.

Originally from Canada, Len Storlien has worked in a number of universities and research institutes in Canada, the United States, England, New Zealand and Australia. He has most recently been a NH&MRC Senior Research Fellow in the Department of Medicine at Sydney University. He has a multidisciplinary background in biochemistry, psychology, neuroscience, nutrition and physiology.

Professor Storlien has a broad range of research interests based around the role of lifestyle (including diet and exercise) and genetic factors influencing the maintenance of health or progression to disease. He is specifically interested in the cluster of diseases linked by insulin resistance: diabetes, obesity, hypertension, lipid abnormalities and heart disease, and he also has an interest in the area of brain control of metabolism and the role of stress in disease.

Len Storlien is involved in national and international collaborations including with a number of groups at the National Institute of Health in the US. He is the author of some 100 articles and is an editorial consultant and reviewer for a number of international journals.

He is pleased to be arriving at a very exciting time of great developments in the Faculty of Health and Behavioural Sciences. 'I am looking forward to establishing collaborative links with a number of groups on campus,' he says. 'Perhaps most importantly I will be working to raise the research profile of the Department of Biomedical Science and to stimulate a major increase in the amount of external research funds.'

ROB WHELAN is Head of the Department of Biological Sciences in the Faculty of Science. Although from Britain originally, Rob Whelan grew up in Adelaide where he completed a degree in biological sciences at Flinders University.

He later undertook his PhD at the University of Western Australia, where his interest in pollination of native plants, especially banksias, began to develop. He spent two years in the School of Plant Biology at the University College of North Wales and was then offered a postdoctoral fellowship in zoology at the University of Florida.

In 1982 Rob returned to Australia to take up a position as lecturer at the University of Wollongong. This move enabled him to rekindle his interest in fire ecology and plant-pollinator interactions.

With the involvement of several research students and colleague Dr David Ayre, the Department of Biological Sciences is now recognised as one of the centres of research activity in pollination ecology and plant ecological genetics in Australia.

Research activity has included the following: competition among plants for the services of pollinator; reasons for low reproductive success in the plant family Proteaceae; genetic consequences of patterns of mating and fruit set in the Proteaceae; and implications of small population size and isolation for conservation of plant species.

Rob Whelan was promoted to Senior Lecturer in 1985, to Associate Professor in 1989 and to Professor and Head of the Department of Biological Sciences in 1993.

'The Department has the potential to be one of the strongest in Australia,' he says. 'Every member of the academic staff has an active research program and attracts postgraduate research students. They also contribute to two very active research programs: The Biological Macromolecules Research Program and the Australian Flora and Fauna Research Program.'

Earlier this year Rob was given one of four Vice-Chancellor's Awards for Excellence in Teaching (see page 27).
UNIVERSITY DAY
AWARDS

University Day in May celebrates the establishment of the university college in 1961 and provides an opportunity for the achievements of staff to be recognised.

Four Vice-Chancellor’s Awards for Excellence in Teaching and six Awards for General Staff for Outstanding Service were presented on 10 May. Two 25 Year Awards were also presented and the winner of the Ethel Hayton Trophy (for notable activities which enhance community support for the University) was announced.

The University Day Address was given by Mr Brian Johns, Chairman of the Australian Broadcasting Authority.

Vice-Chancellor’s Awards for Excellence in Teaching

Damien Considine
Faculty of Law

In 1986 Damien Considine left practice as a solicitor to be a teaching fellow in the Department of Legal Studies in the Faculty of Commerce. In 1988 he became a lecturer, and two years later transferred along with his department to the newly-established Faculty of Law.

In response to the diversity of his students, Damien has experimented as a teacher with methods of presentation and assessment, his primary strategy being the use of the familiar or topical to show a background of legal principles. He believes his role is to provoke and inspire his students, and he has been instrumental in the Faculty in encouraging staff to develop new methods of teaching.

John McQuilton
Department of History and Politics

Dr John McQuilton, who has taught in the Department of History and Politics for the past two and a half years, was nominated for this award by three first year students who were inspired by his lectures, a recommendation that is testament to his skills as a teacher.

Consistently praised in student evaluations and staff opinions, John has been instrumental in the reshaping of all subjects within the department, particularly Australian history. From his own highly-regarded research in Australian history - particularly Ned Kelly and Australians at War - he has also developed new subjects at 300 and postgraduate levels.

Julie Steele
Department of Biomedical Science

Joining the University in 1983 as a lecturer in education, Julie Steele transferred to the new Department of Biomedical Science in 1985. Appreciating the difficulties many students find when studying the theories of biomechanics, Julie encourages students to discover biomechanic principles in action in their intended occupations and in daily life. She also promotes a ‘peer support’ system among her students, to help them assist each other with difficulties.

Julie’s colleagues attest to her competence, her dedication and to her enthusiasm which inspires her students. Her contributions to her discipline and to policy making are also highly regarded.

Rob Whelan
Department of Biological Sciences

In 1982 Professor Rob Whelan joined the University as a lecturer.
Staff given recognition

in biology (see profile on page 25). Employing a teaching philosophy that combines hands-on practice with theory, Rob presents his material as questions to be answered by students through field work, encouraging interest and an active response.

His commitment as a teacher has attracted a considerable number of students to honours and postgraduate work in his special field of interest - ecology. He has also maintained a commitment to other areas such as genetics, and general botany and zoology. His challenging approach is evident in his role in the establishment and continuing development of the new degree in environmental science.

**Vice- Chancellor's Awards for Outstanding Service**

**Robert Slater and Fred Zylstra**

Buildings and Grounds

Responsible for the coordination of the construction programs within the University, the input by Bob (Building Supervisor) and Fred (Project Controller) is essential in the development of the University’s buildings, from the smallest alterations to major constructions such as the Keira View Building.

Consulting with both interested campus groups and external clients, they have worked not only to meet the needs of users but also to ensure that building work meets high standards and time constraints. Their efforts have greatly facilitated the success of building projects at the University.

**John Korth**

Department of Chemistry

As the Chemistry Department’s Laboratory Manager, and a highly regarded researcher, John has extended his role far beyond the expectations of the position. Through his expertise in mass spectrometry and gas chromatography, John has brought nearly $200,000 in consultancy work to the Department and has fostered links both within the University and externally. Within the Department, he has played a major role in the development of commitment to customer service. Dealing with the payments and enquiries for many of the large number of casual staff at the University, she has shown an individual approach to her clients and is willing to give time and patience to difficult enquiries. Her competence and professionalism are well regarded by both her nominators and the many casual staff she assists.

Since receiving this award Doris has moved within the branch and is now working as Assistant Personnel Officer, General Staff.

John has recently been instrumental in the training and support provided for a Chinese visiting fellow, as part of an environmental protection program sponsored by IDP. His role is essential in the $150,000 project.

**Doris Pengelley**

Personnel Services

Working at the University for just over twelve months as a Salaries and Benefits Officer within Personnel Services, Doris has already shown a high level of safety standards and practices.
Lorraine Denny
University Library

Lorraine is the Library's Government Publications Officer and is also studying for an Associate Diploma of Business in Human Resources Development. Using her skills in this area, she is developing training programs relevant to library staff in addition to her everyday duties. A member of the Library's Staff Training and Development Committee and the University's Advisory Committee on Staff Development, Lorraine has recently devised and implemented short programs on quality customer service, improved reading skills and procedure writing.

She has also created and administered a questionnaire to library staff to evaluate current training and assess areas of need. Her initiatives have both improved service to Library users and enhanced staff performance.

Maree Fryer
Department of Electrical and Computer Engineering

As Administrative Officer in the Department of Electrical and Computer Engineering, Maree has shown initiative in developing projects beyond those of her regular duties. In the last 12 months this has included a review of the administrative structure of the Department, through interviews and the development of a comprehensive report. She also created and structured a new course which aims to provide students with training in communication and presentation skills, introducing a new teaching philosophy within engineering courses.

Maree has also continued to foster links with external clients, particularly BHP, showing skill in resolving problems and improving this important relationship.

Sue Visser
Buildings and Grounds

In a position many might see as uninteresting, Sue, one of the University's gate-keepers, developed her role to provide a personal face to the University. The first point of contact when entering the University grounds, Sue's friendly disposition has encouraged praise from many visitors and has enabled her to successfully handle difficult clients with a smile. She also prepares messages wishing students good luck in exams and reminding drivers to turn off their lights on rainy days. Sue's presence on the gate has greatly enhanced the University's image.

Since being nominated for this award, Sue has been successful in her application to become a part of the University's security staff.

Harry Fuller
Department of Biomedical Science

In January 1968 Harry Fuller began teaching at the then Institute of Education as a lecturer in physical education. Through his dedication to and belief in his subject area - exercise physiology - he has developed a thorough approach to teaching, focusing on attention to detail, quality of lectures and laboratory classes, and time and effort given to student needs. He presents his subject through reference to its application in everyday life.

An outstanding sportsman, Harry was placed sixth in the World Archery Championship, and is a legendary fisherman and national champion in casting. He received a research grant from the Australian Sports Commission and has patents pending on designs for sporting equipment for the disabled. He has also conducted a national survey on fishing participation patterns.

Ron Wilcox
Faculty of Education

Ron Wilcox came to the then Institute of Education in January 1968 as a lecturer in mathematics. At that stage only primary school and physical education students were being trained and it was not until five years later that a course for training teachers of secondary school mathematics was introduced. It was Ron who took up much of the initial work in this area, having by then completed a Master of Science.

His other involvements include the development of a religious studies course for external education students wishing to...
upgrade their qualifications, contact with Christian student groups on campus and a role in the establishment of one of the first Christian schools in the Wollongong area. More recently Ron has become involved in the Gateway program, helping students who have reservations about mathematics to gain more confidence.

**Award of the Ethel Hayton Trophy**

The trophy was presented this year to Peter Bannister for his longstanding unpaid service to the University and the community in the promotion of sport, especially soccer. As a player and subsequently as Manager and now President for the past 12 years of the University Soccer Club, Peter has encouraged community involvement in soccer through donations, sponsorships and by encouraging young players.

One of his most outstanding achievements has been the construction, on a personal and voluntary basis, of the Soccer Sports Building at the Koolabong Sporting Complex, which is a valuable resource for the whole community.

graduation ceremonies in May, it can accommodate 1,000 people seated and 1,600 standing. The new hall has a large screen for the viewing of movies and the spacious foyer area has already been used for art exhibitions.

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HILTON PROUDLY SUPPORTS THE UNIVERSITY OF WOLLONGONG.
LAUCHLAN CHIPMAN LEAVES THE ILLAWARRA

Former Pro Vice-Chancellor (Academic), Professor Lauchlan Chipman recently left Wollongong after 18 years to become Pro Vice-Chancellor and Director of Monash University’s Gippsland Campus.

Located at Churchill in Victoria’s Latrobe Valley, Gippsland is the second largest of the five Monash campuses. It currently enrols over 7,000 students and is the major distance education centre for Monash. Professor Chipman says there are plans to expand the campus and to strengthen its regional ties. During his 18 years in the Illawarra he was very much involved with the local community as well as the University, a fact which no doubt influenced his new appointment. He explains this broad involvement as ‘an expression of the affection that I have for the community.’

He has just completed a term as a ministerial nominee on the Illawarra Area Health Service Board and chair of its Ethics Committee. He is also a member of the SBS Community Advisory Committee, and was the first patron of Wollongong City Council’s Illawarra Quality Improvement Network. From 1989-93 he was chairman of the Friends of the University.

With the formation of the Office of Development and Community Affairs, Lauchlan was responsible for the Alumni and the Foundation as well as the Friends and the Cooperative Scholarships Program, which further cemented his commitment to the community. He notes the irony in the fact that he can no longer serve on the Alumni Board but can join the Alumni Association as a former staff member.

Lauchlan is certainly amongst the University’s most illustrious alumni. He joined the University of Wollongong as Foundation Professor of Philosophy in 1975. He was previously senior lecturer in philosophy at Melbourne University, and had held various short term appointments at Oxford University.

Since 1972, when he obtained his doctorate from Oxford, Professor Chipman has published an impressive array of journal articles, book chapters and reviews, monographs and papers, as well as serving as national president of both the Australasian Association of Philosophy and the Australian Society for Legal Philosophy. Since 1975 he has also published over 200 columns in newspapers and magazines all over Australia, and for nearly ten years he was a regular guest on Sydney’s 2GB radio station.

From 1981-84 Lauchlan held a joint appointment as visiting professor in jurisprudence at Sydney University Law School, as well as the chair in philosophy at Wollongong. He retained the association with Sydney until this year as a special lecturer in some of the graduate law programs. During 1985-86 he was appointed Liberal Arts Fellow in law and philosophy at Harvard Law School, the first Australian to hold that position.

During his time at Wollongong, Lauchlan has had three terms as deputy chair of the Academic Senate and one as professorial representative on Council. In recognition of his distinguished record of achievement as a teacher, scholar and University leader and his contributions to the wider community, in August the University Council conferred on him the title of Emeritus Professor.

Wollongong is the fourth Australian alumni organisation to claim Lauchlan, but it is Wollongong with which he believes he has the longest and strongest connection. When asked how he sees the future of the University, he says, ‘It’s clearly moving up the ladder of Australian universities. Its international reputation is following its national one, and that’s contributing to the image of the city.’ Lauchlan has made a significant contribution to this progress and he is greatly missed. His friends all wish him well in his new appointment.

Professor Christine Ewan, Dean of the Faculty of Health and Behavioural Sciences, has now been appointed Pro Vice-Chancellor (Academic).
MEMORIAL TO
ALLAN SEFTON
ESTABLISHED

Allan Sefton was well known in the Illawarra and beyond for his work as a naturalist and conservationist of the local environment.

An employee of the Port Kembla steelworks, Allan’s spare time was spent recording information about local flora and fauna, advising on the proper use of resources and attempting to ensure that the local environment was properly managed.

His efforts were acknowledged by the award of the British Empire Medal (1975), the Order of Australia and the prestigious Australian Natural History Medallion (1978). The University also recognised Allan’s contributions to environmental science and conservation in the Illawarra by awarding him an honorary PhD in 1989. Unfortunately Mr Sefton died a few days before he was due to receive this award.

In recognition of his contributions to environmental science in the Illawarra region, Wollongong City Council and BHP have donated funds to the University to be used as appropriate to honour the memory of Allan Sefton and his work.

Discussions between the donors, the Sefton family and the University have led to the proposal that a portion of the income derived from the Allan Sefton Memorial Fund be used to award a prize to the best student graduating in the honours Bachelor of Environmental Science program at the University. This is very timely as the Allan Sefton Prize can be awarded for the first time this year, when the first group of students will complete the BEnvSc (Hons).

The balance of the income from the fund is to be used in helping to establish an annual Allan Sefton Memorial Lecture. This will be a public occasion where a distinguished Australian scientist will speak on a topic of wide environmental interest.

The lecture series has been initiated this year with the Inaugural Allan Sefton Memorial Lecture, which was given on 23 September by Professor Harry Recher, Associate Professor in the Department of Ecosystem Management at the University of New England, Armidale. Professor Recher’s lecture was titled ‘Science and Conservation: towards alternative strategies for protecting Australia’s biological resources.’ His comments were very well received and stimulated wide discussion amongst the audience.

Over 160 people attended the inaugural lecture in the Hope Theatre, including representatives of the University and business communities, the sponsors of the Allan Sefton Memorial Fund, as well as friends and relatives of the Sefton family.

During the evening Professor Gerard Sutton, the University’s Deputy Vice-Chancellor, announced the establishment of the Environment Research Institute, whose main aim is to foster greater coordination of research and consulting activities at the University focusing on environmental issues.

ELECTION OF TWO MEMBERS TO THE UNIVERSITY COUNCIL
BY MEMBERS OF CONVOCATION

This is your opportunity as alumni to have a voice in the affairs of the University through its governing body, the University Council. If more than two nominations are received, an election will be held, with voting papers despatched on 1 November. So be sure to vote when you receive the ballot papers and return them as instructed by 3 December 1993.

The term of office for the elected members will be four years from 1 January 1994. The Convocation members are elected by and from the members of the Convocation of the University, which consists of: graduates of the University; graduates of the University of New South Wales who were enrolled for at least three years at the Wollongong University College; graduates of the Wollongong Institute of Education and of the Wollongong Teachers’ College; the past and present members of the Council; the members of the full and part-time academic staff; the full-time non academic members of staff who are graduates of other universities; other such members as have been approved from time to time by Council on application.
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