

LA TROBE UNIVERSITY

# Bulletin

NOVEMBER / DECEMBER 2003

## 'WHITE AUSTRALIA'

Just another American cultural import?



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To what degree did the American political and social experience in the decades after the Civil War lead to the introduction of the White Australia Policy? See page 8

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## New Italian Centre counters risks to language education

A major step towards ensuring Italian is preserved as a community language in Australia was taken recently with the opening of the Italian Australian Institute Centre at La Trobe University.

La Trobe University Vice-Chancellor, Professor Michael Osborne, said current educational policy in Australia posed a serious danger that languages – even quite important languages such as Italian – were at risk because of the pressure on universities to increase the vocational and professional areas and to forsake fields of low student interest.

The State Minister for Education and Training, Ms Lynne Kosky, opened the centre, located on La Trobe University's main Melbourne campus at Bundoora.

Professor Osborne said the establishment of the centre was another step in the fulfilment of the University's plan for a 'Mediterranean Precinct' at the Bundoora campus – embracing initially the Italian, Spanish and Hellenic cultures – and in its aim to become one of the key centres for the main community languages of Australia.

The Chairman of the Italian Australian Institute, Mr Rino Grollo, said the opening of the Institute's new centre was a significant event for Italian Australians, for La Trobe University and the Australian community.

He said 60 million Italians lived in Italy – and 60 million people of Italian heritage outside Italy. In a recent study it was found



From left, Rino Grollo, Minister Kosky and La Trobe Vice-Chancellor, Professor Osborne.

Creation of the centre will encourage and support study and research into all aspects of the historical, cultural, social and political presence of Italians in Australia – with a special focus on the interests of younger generations.

Ms Kosky said Italian was the second largest language in Victorian schools, after Indonesian, taught from primary schools to VCE. She congratulated La Trobe on its commitment to Mediterranean languages and for engaging 'very directly' with the Italian community, and for helping develop new knowledge and understandings for the future.

that one in eight Victorians had an Italian background, representing by far the most centralised group of Italian people in Australia.

The Italian Australian Institute (IAI) is a non-profit organisation operated under the auspices of the Rino and Diana Grollo family with the strong support of La Trobe University and community organisations such as the *Associazione Nazionale Alpini* (an organisation of Italian ex-servicemen and their families).

The IAI keeps and safeguards material which bears witness to Italian culture in Australia, so that it will be accessible for new generations and for research purposes. ■

## AUSTRALIAN RESEARCH COUNCIL GRANTS

# Fighting malaria and understanding 'White Australia'

La Trobe University researchers have secured 13 new ARC Discovery Research Grants worth a total of \$4.88 million over the next five years.

Eight of these grants are in the category of Humanities and Social Sciences. Deputy Vice-Chancellor (Research), Professor Fred Smith, said projects receiving support cover a broad spectrum of social and historical issues. These include studies in linguistics, the foundation of the Social Sciences in Australia, the history of White Australia (see page 8), the rise of early states in China, the role of women at the Eureka Stockade and overcoming problems in learning mathematics.

Research into the defence mechanisms that protect the reproductive tissues of plants against micro-organism damage, protein quality control, the flowering time of plants and the impact of the malaria parasite on the host red-blood cell membrane, are examples of the five new projects receiving support in the Sciences and Mathematics. Research into the history of the Brotherhood of St Lawrence, the Melbourne based Anglican welfare organisation, is being supported through an ARC Linkage grant.

Three Linkage – Infrastructure Equipment and Facilities (LIEF) grants administered by La Trobe will support the construction of an interactive HIV policy data bank (see next page), the completion of the Tasman International Geospace Environmental Radar and the development of a searchable digital index to *The Argus* newspaper from 1870 to 1909, which will be available through the Internet.

La Trobe researchers in surface science and nanoscale materials will also benefit from participation in another three LIEF grants administered in other institutions. ■

*See page 4 for a list of the Discovery Research Grants.*



## New plant genomics centre launched

The La Trobe University-based Department of Primary Industries' Plant Biotechnology Centre is a partner with the University of Melbourne's School of Botany in the new Victorian Centre for Plant Functional Genomics (VCPFG).

The centre was officially launched late this year by Victorian Minister for Innovation, Mr John Brumby. It provides key platform technologies for the Victorian agricultural and food sector.

Mr Brumby said the centre's research would enhance plant resistance to drought, frost and salinity and had the potential to significantly benefit the environment.

Some projects already in progress at the Plant Biotechnology Centre at La Trobe under the leadership of Professor German Spangenberg relate to native grasses and legumes such as a salt-tolerant grass previously thought to be extinct; a weeping

grass that can cope with high aluminium levels in soil; and the development of hypoallergenic ryegrasses that can reduce hay fever.

Mr Brumby said the centre supports agricultural production and food processing sectors responsible for 11 per cent of the Gross State Product and 33 per cent of Victoria's exports.

Professor Spangenberg said the VCPFG – through its association with the successful Federal Government bid for the Australian Centre for Plant Functional Genomics and the new Molecular Plant Breeding CRC headquartered in Melbourne – is poised to capitalise on a national research grid that will advance genomics discoveries and their conversion into genetic solutions for plant industries. ■



Minister Brumby and Professor Spangenberg, right, at the launch.



**A** new web-based data bank on HIV/AIDS in the Asia-Pacific region is being set up following the award of a \$102,000 ARC Linkage Infrastructure Equipment and Facilities grant administered by La Trobe University.

Three La Trobe professors – Dennis Altman, Politics, above; Vivian Lin, Public Health; and Marian Pitts, Director of the University's Australian Research Centre in Sex, Health and Society – lead the team from four universities and three other institutes involved in the project.

The increase in HIV/AIDS posed a greater threat to the security of the Asia Pacific region than terrorism, said Professor Altman at the opening of the 15th Annual Conference of the Australasian Society of HIV Medicine (ASHM) in late October – which coincided

# AIDS a greater security threat than terrorism

## La Trobe leads new HIV/AIDS Asia-Pacific data bank project

with the announcement of the new ARC grant.

'The growing spread of HIV in the Asia-Pacific, in particular its rapid growth in major countries such as India, China and Indonesia, has major implications for the stability and cohesion of the region, and by implication for global stability,' Professor Altman said.

'In absolute numbers, infections in Asia will probably exceed the African figures within a decade. The UN estimates that nearly 30 million people are living with HIV/AIDS in sub-Saharan Africa and in the Asia Pacific region that figure is around seven million but this a conservative estimate.

'Already in India the UN estimates that around four million people are living with HIV/AIDS, but again these statistics are very imprecise. In Cambodia 10,000 people will die each year for the next decade from HIV, while Papua New Guinea faces a huge crisis which former Prime Minister, Sir Mekere Morauta, identified as having the potential to undermine the survival of the country.'

Professor Altman said the magnitude of the problem had been sidelined in recent years due to growing international conflict.

'The impetus for recognising HIV as a first order threat, as in the Security Council and General Assembly debates of 2000 and 2001, seems to have declined since the events of September 11 and the subsequent wars in Afghanistan and Iraq.

'Yet to ignore the lessons of the epidemic in Africa, where it is effectively destabilising most of the continent, because of current concerns with the threat of terrorism, is to risk a heightened emergency on a scale even greater than that affecting Southern Africa,' he said.

The ASHM Conference hosted health officials and researchers from Indonesia and Papua New Guinea to discuss developments in HIV science and research with Australian delegates and their implications for the Asia Pacific region.

ASHM is Australia's peak organisation representing medical practitioners and health professionals working in HIV and related disease areas.

Others involved in the AIDS database project are the University of New South Wales, the ANU and Deakin, as well as the Burnet Institute and Australia's International Health Institute, Society for HIV Medicine and Federation of AIDS Societies. ■

## ARC DISCOVERY GRANTS

*Continued from page 3*

**SOCIOLOGY:** Professor P Beilharz, Dr TL Hogan (Jean Martin and the social sciences in Australia) \$180,000; Professor Beilharz (Social division and the pursuit of harmony across the antipodes in the twentieth century) \$190,000.

**LINGUISTICS:** Mr AR Coupe, Australian Postdoctoral Fellowship, (A typology of adverbial subordination and clause linkage in Tibeto-Burman languages) \$264,000; Professor RM Dixon, Professor AY Aikhenvald (Basic Linguistic Theory) \$300,000

**BIOCHEMISTRY AND CELL BIOLOGY:** Dr D Dougan, Dr KN Truscott, Queen Elizabeth II Fellowships, (AAA+ proteases: substrate

binding, translocation and modulation by novel adaptor proteins) \$1.1 million; Dr LM Tilley, Dr N Klonis, Australian Research Fellowship, (Oxidative stress-induced alterations of the host erythrocyte by the malaria parasite) \$510,000; Dr MA Anderson (Molecular basis of anti-microbial and insecticidal activity of floral defensins from the Solonaceae) \$285,000.

**BOTANY:** Dr AR Gendall (When to flower – analysis of a novel genetic locus (FLH) that accelerates flowering) \$300,000.

**ECOLOGY AND EVOLUTION:** Mr MR Kearney, Australian Postdoctoral Fellowship, (Are natural clones specialists or generalists? Using a model system to test alternative hypotheses for the advantages of parthenogenesis) \$300,000.

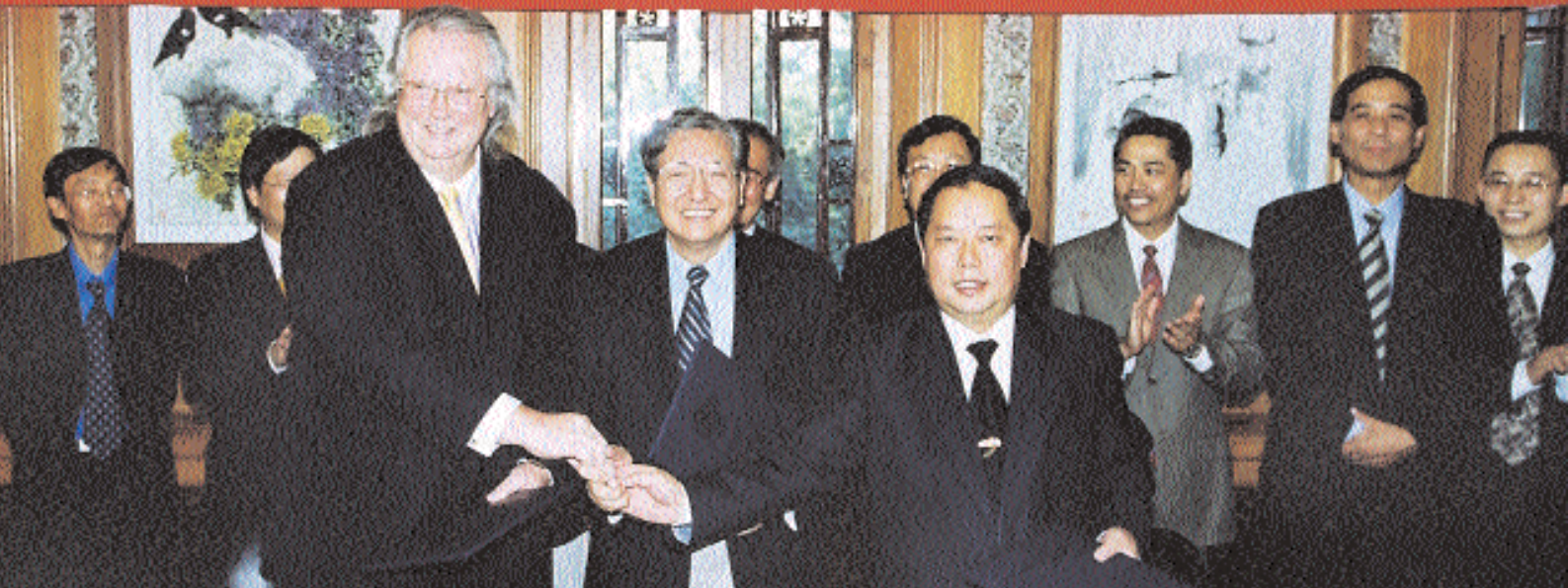
**HISTORICAL STUDIES:** Professor M Lake, Australian Professorial Fellowship, (White man's country and the critics: a trans-national history) \$488,500; Dr CA Wright, Australian Postdoctoral Fellowship, (Eureka's women: an intimate history of sex, class and culture on the Victorian goldfields) \$220,000.

**ARCHAEOLOGY AND PREHISTORY:** Dr L Liu, Professor X Chen, Dr Y Lee, Professor HT Wright, Dr AM Rosen (Settlement patterns, craft production, and the rise of early states in China) \$570,400

**CURRICULUM STUDIES:** Professor PA Sullivan, Ms JA Mousley, Professor RL Zevenbergen (Maximising Success in Mathematics for Disadvantaged Students) \$170,000. ■

# 石河子大学·拉筹伯大学学术交流协议签

## Agreement for Academic Cooperation between La Trobe University, Peking University



Front row from left: La Trobe's Professor Osborne, with Professor Xu Zhihong, President of Peking University, and Professor Xiang Benchun, President of Shi He Zi University, at the signing ceremony.

## New links with China

**L**a Trobe University Vice-Chancellor, Professor Michael Osborne, recently signed a unique tripartite agreement with Peking University and Shi He Zi University in the Xinjiang Uygur Autonomous Region of the Peoples Republic of China.

Shi He Zi is a city situated in the far west of China near the border with Kazakhstan and Mongolia and the Shi He Zi University has the mandate to develop university education and training in this remote region. It is a comprehensive university with an enrolment of some 26,000 students. In 2001 the Ministry of Education appointed Peking University as a partner to assist in its development.

Professor Osborne said: 'Peking University – or Beida as it is popularly known – is the premier university in a country that has hundreds of outstanding universities. It is thus a signal indication of the strong reputation of La Trobe University in China that Peking University has invited us to be a partner in this important developmental project.'

He said the agreement encompassed exchange of staff and students, joint research activities and the co-organisation of academic conferences. Areas of particular interest include Agriculture, Plant Biosciences, Public Health, and

Business Studies as well as Humanities and Social Sciences, notably Linguistics, History and Archaeology – all major strengths of La Trobe University.

La Trobe maintains a strong suite of programs in China, especially in Public Health, Business and Linguistics, all of which are taught offshore in many Chinese cities. It also provides a wide variety of customised short courses – most recently a course to prepare senior administrators in Qingdao for the yachting program of the 2008 Olympic Games.

Professor Osborne was appointed as a Professor of Peking University earlier this year, and he will begin a lecture series on the archaeology and history of Greece shortly. This will complement offerings from Professor Tim Murray and Dr Li Liu in Archaeology and Drs Pei Likun and David Legge in Public Health. ■

## Bendigo Innovation Park a first for Victoria

A new \$3.3 million Central Victorian Innovation Park at Bendigo has been opened by the Minister for Innovation, Mr John Brumby. The park houses leading-edge communications infrastructure, and

has been designed, conceived and led by La Trobe University, Bendigo, the City of Greater Bendigo and Bendigo Community Telco. Funded by a State Government Regional Infrastructure Development Fund grant, it is the first publicly funded, University endorsed technology innovation-based business park in Victoria.

La Trobe, Bendigo Acting Pro-Vice Chancellor, Professor Peter Sullivan, said the Park, on 2.8 hectares of University-owned land, aimed to contribute to regional economic growth by supporting new innovation-based businesses and research and development opportunities.

City of Greater Bendigo Mayor, Cr Rod Fyffe, said the State Government is to be commended for entrusting the City and La Trobe University, Bendigo with the charter to create this technology park. Mr Brumby said stage one of the project was a leading-edge Business Continuity Centre operated by Bendigo Community Telco.

Member for Bendigo East and the Minister for Education Services, Youth Affairs and Employment, Ms Jacinta Allan, who accompanied Mr Brumby, said stage two will include attracting new tenants and businesses, boosting high-tech jobs for the region. ■

# Managing the Murray with the 'Sadim touch'

That's the 'Midas Touch' in reverse! And, according to Dr Roger Croome, it has 'come into play more often than we would like in the ecological management of the Murray'.

Delivering this year's highly topical and timely Jonathan Mann Memorial lecture, Dr Croome – from the Department of Environmental Management and Ecology on La Trobe University's Albury-Wodonga campus – said it was now time to redeem ourselves.

His lecture detailed the river's problems and canvassed possible remedies. It coincided with the recent decision to move the Albury-Wodonga laboratory of the Murray-Darling Freshwater Research Centre to La Trobe's Albury-Wodonga campus, and the forthcoming opening of a similar joint research facility on the Mildura campus.

Building on existing collaborative research projects with La Trobe, these laboratories will boost research along the length of the southern Murray-Darling Basin at a time when the Commonwealth and State governments have agreed to invest \$500 million over five years in revitalising the Murray-Darling system.

'History will show,' said Dr Croome, 'that in 2003 we were fully aware of the parlous state of the Murray system – and of many of the threats to come – and, by and large, that we had the means to address them.'

Dr Croome said like all settlers, we tried to turn the river into 'a gold of sorts' by growing produce and now trading in water rights. He said a large proportion of the flow was committed for diversion – some 80 per cent.

'What proportion of a river's natural flow would you consider could be taken before ecological consequences might become apparent? I understand that in Canada around 30 per cent is the rule of

thumb'. He then listed examples of the Murray's present ills.

Red Gums were in decline with many trees appearing to suffer from prolonged water stress.

'All size and age classes are affected, with 70-100 per cent of trees in certain areas being stressed to some degree, or dead.'

The Murray Mouth continued to present problems with restricted flow into the sea. Fish – the aquatic equivalent to a 'canary in the coalmine' – are under great threat. The native Murray Cod was this year listed as a threatened species.

'Our native fish populations are about ten per cent of their pre-European settlement levels, and without intervention this may fall to five per cent over the coming decades.'

Water quality problems of most concern, Dr Croome said, were water temperature (impacting on invertebrates and fish), salinity (once the province of the irrigation areas), turbidity and nutrients.

'With the march of dryland salinity, one estimate is that an area the size of Victoria could be lost to traditional agriculture by 2050.'

He said nutrients and algae, blue-green algal blooms in particular, had done much to swing public opinion behind responsible environmental management.

This problem, the focus of his own research, was complex with interactions between nutrient supply, turbulence, turbidity and underwater light penetration.

'There have been marked changes in the Murray downstream of Mildura because it is a river no more, but rather a long thin lake.'



Dr Croome, right, with members of the Mann family, from left, Bruce, Elaine and David Mann, and his wife Margaret Croome.

Turning to possible remedies, Dr Croome discussed changes to weir pools, de-watering of wetlands (ironically, many flood plains receive too much water as irrigation water is passed down-stream in summer), native fish initiatives against introduced carp and mosquito fish, the 1997 cap on water use which highlighted issues of river regulation and diversions, and current initiatives to re-allocate water for environmental use.

Dr Croome said many questions surround the issue of returning water to the Murray. 'Where will the water come from? It has been openly stated that the largest proportion will be gained from the Goulburn, Murrumbidgee and Lower Murray systems.

'Will it be gained simply from water use efficiencies? As we become more efficient in our water use, less water will make its way back to our rivers – another problem!

'What about compensation for farmers and the role of water trading? Should we have an Environmental Trust or Bank account?'

'These and many other questions relating to economic and social issues are being posed. Many environmental questions also remain.'

What is the role of scientists in all this?

*Continued page 11*



From left, Dr Ferguson, Ms Reynolds with day-care infant Nicholas, Dr Skouteris and Dr Dissanayake.

during the last quarter of the first year of life. This latter period is thus marked as a potentially sensitive one in which to place infants in care.

The findings showed that on average, babies entering care within the first six months of life took less time to settle into care and were generally happier on arrival and while in care compared with the eight – 14 month-old babies. While a child's temperament had some bearing on the ease of settling, the age of the infant still affected the settling process after the influence of temperament was accounted for.

In Australia the allocation of unpaid maternity leave for working women covers 12 months, and the employee generally returns to work at the termination of this period.

This structuring of maternity leave leads to a perception that 12 months or sometime thereafter is the best time to introduce the infant to non-parental care.

Dr Dissanayake says: 'Our data counters this perception. Indeed the fact that infants are more unsettled as a result of entry into formal childcare later in their first year has a number of implications for the policies of both government and non-government organisations with regard to the length and timing of maternity leave and equal opportunity for women in the workplace.' ■

## Entry into childcare – earlier is easier

The younger an infant enters a childcare centre, the easier he or she settles in, La Trobe University researchers have shown in a new study.

While most childcare workers know this instinctively, psychologists at La Trobe University's Child Development Unit have now shown this experimentally.

They found that babies aged up to six months settle more easily into formal childcare compared with older infants aged from eight to 14 months.

Developmental psychologists Dr Cheryl Dissanayake and Dr Helen Skouteris, with co-investigators Ms Jenny Reynolds (Director of the La Trobe University Children's Centre) and Dr Kerry Ferguson (Pro-Vice Chancellor, Equity and Access), surveyed 98 mothers of infants placed into day care at 32 Melbourne-based centres.

The project, between January 2002 and May 2003, was financed jointly by La Trobe University and three industry partners via the La Trobe Industry Collaborative Grants scheme.

Parents completed the Daycare Experience Questionnaire which inquired about how easily their infants settled into day care and how they settled into their home routines after day care.

Other questions probed different variables including profiles of the mother, family and the child. The questions sought information about the mother's psychological wellbeing, marital relationship and anxiety levels, parents' occupation and work patterns, income levels and cultural backgrounds, the child's temperament, birth order, number of siblings and also the quality of the various childcare centres sampled.

'Preliminary data supports the hypothesis – based on "attachment theory" – that children younger than eight months will settle faster and have a more positive transition to childcare than infants aged eight months or older,' Drs Skouteris says.

While the development of the attachment relationship begins at birth, it is from six months onwards that the relationship begins to consolidate. The onset of stranger anxiety at about eight months means that maternal separations may be most stressful



# White Australia

## Just another American cultural imp

To what degree did the American political and social experience in the decades after the Civil War lead to the introduction of the White Australia Policy?

The possibility that this experience was a major contributor – if not the major philosophical basis – of the White Australia Policy is the theme of research by La Trobe University historian, Professor Marilyn Lake. She suggests that historical understanding is enhanced by the adoption of trans-national analytic frameworks.

Professor Lake, who holds a Personal Chair of History at La Trobe, has received

a \$488,000 ARC Professional Fellowship over five years for her research into the history of White Australia under the title: *White man's country and the critics: a trans-national history*.

She is examining evidence that the view of late 19th century American politicians and, more perplexingly, intellectuals that emancipated Black slaves and their descendents, were incapable of contributing towards the democratic process, influenced our 'founding fathers'.

In a paper presented at a La Trobe seminar recently, entitled *American history down under: radical reconstruction and White Australia*, Professor Lake traced connections between some of our founding fathers and American writers and others who regarded Blacks as lesser beings.

Professor Lake's interest in possible

American influences on the evolution of Australia's racial policies was stimulated during her recent appointment as Professor of Australian Studies at Harvard University.

She said that most past studies on the origins of the White Australia Policy have been narrow, and constrained by national frameworks of analysis, concentrating on race as an immigration restriction, as exemplified by the colonial, and later Commonwealth Government discrimination against Chinese immigration.

These studies ignored the fact that 'founding fathers' – such as Deakin, Higgins, Barton and the writer Charles Pearson, whose efforts contributed to the founding of the Commonwealth – looked to the American experience as the first post-colonial nation in the modern world.

Their philosophical attitudes were influenced by the writings of American intellectuals and by their personal visits to the USA.

Professor Lake said the introduction of the modern census was also an influence. An end of century census in the USA counted more than eight million blacks and disclosed that their numbers were increasing. This highlighted the concept of the White man under siege

The English writer, Viscount James Bryce – whose work Higgins had studied – considered the deportation of American Blacks in his famous book *The American Commonwealth*. Higgins had also visited Brazil to ascertain whether Blacks and Whites could live together, and concluded that they could not.

This and notions of the superior white race resulted in one of the first acts of the new Federal Parliament being a law expelling Kanakas who had been imported from South Sea islands to work in the Queensland cane fields.

It was the first time in world history that a nation state has expelled a resident group purely on the grounds of race.



a  
ort?

Professor Lake

Higgins and Deakin had also visited San Francisco and were horrified at the way that city's Chinatown was isolated from the rest of the community. Higgins even told Parliament that the USA was experiencing the 'greatest racial problems ever seen in the world'. He was anxious that Australia not experience such problems.

In their attitude towards non-Europeans, Australian colonialists were at loggerheads with British imperialists who advocated the equality of all races – from Hottentots to Indians – within the British Empire. On this issue Australians identified more with their White cousins in the USA rather than with fellow Empire-minded Britons.

While enshrining the philosophy that Anglo-Saxon communities were superior, Charles Pearson saw that decolonisation was inevitable – and because of that Chinese and other races, by their superior numbers, would eventually predominate. In this he inadvertently gave some hope to non-Europeans for a brighter future.

However he and the other colonists saw the White Australia Policy as encompassing much more than immigration restriction. It represented a new world civilisation, enshrining not only a way of life but the highest level of civilisation.

The early Australians excluded the new federal parliament from powers to deal with Aborigines because, like their American counterparts, they expected native races to die out and for the residue of mixed race people to assimilate into the white population.

Professor Lake will pursue this research on the origins of the White Australia Policy with her recently awarded Professorial Research Fellowship, see also page 4. ■

## INFLUENCE OF STRESS AND COPING ON IMMUNITY

Two decades ago research on mind-body connection – how the mind affects the body – was almost in the realm of science fiction.

Vivid horror movie portrayals of mind-body connection, like Frankenstein's monster with tubes into his brain to control his body, do little to help public appreciation of what is fast becoming a vital area of medical and psychological research into disease prevention and control.

Two La Trobe University departments, in collaboration with an American researcher, are in the forefront of investigating how the stress experience can influence progression of disease in the body.

Professor Robert Drugan from the University of New Hampshire recently

While in Australia, Professor Drugan conducted a series of tests using equipment made to his design by School of Psychological Science technicians, Russell Beaton and Ian Moore, to ascertain how laboratory rats react to stress.

As a prelude to the tests, the rats, when lowered in a perforated cylinder into water, had to swim, but learned to press a lever which resulted in the cylinder rising out of the water.

In the tests, two rats in perforated cylinders were lowered into controlled temperature water (30 °C). In one cylinder, the lever worked normally – resulting in the cylinder rising out of the water. In a second cylinder, nothing happened when the rat pressed the lever.



Professor Drugan, right, with Dr Kent, centre and Dr Flannery.

completed a six-month visit as a Distinguished Visiting Fellow at La Trobe's Institute for Advanced Study working with Dr Stephen Kent in the Department of Psychological Science and Dr Graham Flannery in the Department of Genetics.

'Basically we spent the six months investigating how coping may protect an organism against the effects of stress on the immune system,' Professor Drugan said.

'We have combined Steve's interest and expertise in tracking sickness behaviour with my interest in psychological stress and its possible effect on the immune system.'

'In this way we created a situation where both rats were under stress, but one had a method to cope while the other did not. A third rat was involved in each experiment as a control. Its cylinder went up and down but did not go into the water and hence it underwent no stress,' Professor Drugan said.

'We measured each rat's stress hormones and both rats that were lowered into the water had very large elevations of the stress hormone, corticosterone, but there were no differences between those that had control and thus could cope and those that did not.'

*Continues page 10*

# Care for kids with cleft lips and palates



Internationally recognised speech and language therapist, Dr Debbie Sell, is working with La Trobe University and other Australian academics and clinicians to improve the management of children with cleft lip and palate and related conditions.

Such children comprise one live birth in about 700 in Australia and other western countries – and more in Asia.

Dr Sell heads the Speech and Language Therapy Department of London's Great Ormond Street Children's Hospital and is an honorary senior lecturer in the Institute of Child Health at the University of London.

She is spending three months as a Distinguished Visiting Fellow at La Trobe's Institute for Advanced Study. Here, she works closely with Professor Sheena Reilly, Associate Dean of Research in Health Science, on projects ranging from benchmarking care outcomes to feeding problems of infants with this condition.

Dr Sell and Professor Reilly both supervise PhD students and believe evidence from this research will advance considerably our understanding of the nature of these problems in infants, leading to more informed management of their conditions.

A project to evaluate speech therapy aims to both strengthen links between La Trobe staff and clinical staff at the Royal Children's Hospital and provide students with added opportunities to learn about working with children who have these conditions.

While at La Trobe, Dr Sell gave classes and workshops for students in the Human Communication Sciences and was a keynote speaker at the Australian Cleft Lip and Palate Association Meeting in Sydney.

She also presented papers and workshops at other conferences and meetings, including the first 'Cleft Symposium' at the Melbourne Cleft Lip and Palate Centre at the Royal Children's Hospital.

A joint founder and deputy director of the Sri Lankan Cleft Lip and Palate Project, Dr Sell has directed speech and language therapy there since 1985. She will visit Sri Lanka on her way home to Britain to evaluate progress. ■

*Continued from page 9*

## THE INFLUENCE OF STRESS AND COPING ON IMMUNITY

To compare the impact the two different kinds of stress on the immune system two subsequent steps took place.

First, Professor Drugan and Dr Kent implanted a tiny biotelemetry device in the abdominal cavity of the rats which enabled the researchers to monitor the rats for illness and immune response.

Second, Dr Kent injected into each rat an active fragment of bacteria cell wall. This activated the rat's immune system. The rat's body reacted to the bacteria as to a foreign entity and its immune system went into operation.

'We measured each rat's characteristic sickness behaviour following stress. The telemetry implant enabled us to track on the computer the progress of the induced fever, and changes in physical activity. We also monitored food and water intake. Rats that had been stressed 24 hours before being immunologically challenged had larger and more prolonged fevers than controls.

'Surprisingly, the rats that did not have any control over the stress procedure had fevers in between the stressed rats with control and home cage control rats. The immune-induced decreases in food and water intake were the same between all groups.

'Then in co-operation with Dr Graham Flannery's laboratory in the Department of Genetics, we measured the effects of stress and coping on the innate or non-specific immune systems.

'Specifically, we quantified the ability of natural killer cells to attack tumour cells. Our preliminary results suggest that the stressed rats have an impaired immune response with the killing of tumour cells decreased by more than a third. Again, the stressed rats with no control had levels between the stressed rats with control and home cage control rats.

'All of this is helping us understand the importance of coping with stress and how this may affect the immune system,' Professor Drugan said.

'We expected that coping would minimise the effects of stress, however, it appears that the physical demands of the coping response negated the psychological benefits of stress control. In the future we plan to reduce the demands of the coping response to see if this results in a protective effect of coping on the immune system.'

Co-operation between Professor Drugan and Dr Kent began when they met in 1998 at an NIH-sponsored Workshop on Psychoneuroimmunology in Kansas City.

'At the conference we found that we had mutual research interests and my visit to La Trobe has seen great advances in the development of our work,' Professor Drugan said. ■

## Alzheimer – gone but not forgotten

**A**lzheimer's disease is among the major causes of disability in our community. This, and other forms of dementia, were the subject of this year's Sir John Quick Lecture, held at La Trobe's Bendigo campus

Titled, *Alois Alzheimer – Gone but not Forgotten*, it was presented by Dr Tony Snell, an Associate Professor and Consultant Physician in Geriatric Medicine, at the Bendigo Health Care Group.

He says the number of dementia sufferers in Australia is estimated at 162,300 people – or 0.8 per cent of the population, costing the nation \$6.6 billion a year. By the year 2050 that number is predicted to rise to 580,000 people, or 2.3 per cent of the population.

His lecture outlined the latest knowledge about the disease, known risk factors, its clinical diagnosis, possible causes, and four drug treatments available in Australia.

However, he says results from drug treatments have been modest: memory improvements of only three to four points on a scale of 70 points. While there are also trials of herbal remedies, Professor Snell says the major goal of treatment is to support sufferers and their carers. ■

*Continued from page 6*

## Managing the Murray

Dr Croome said scientists were no longer seen as white-coated figures of authority. Science was a gradual process of discovery and reasoning, and it was acceptable that scientists had opposing views and argued those as part of the process.

'Secondly, what we don't know is staggering. We haven't described the bulk of the organisms we share our ecosystem with as yet, let alone determined the interactions between them. 'How the scientific advice will be effectively integrated with economic and social considerations is far from clear, but there are many international observers watching to see how we resolve such a vexing issue

The text of the lecture is available from Tel: (03) 5444 7004



## Politics of engagement

Democracy cannot work, said Susan Davies, if people turn away from parliament and sneer at politicians. Delivering the 25th Annual Caroline Chisholm Lecture at La Trobe University recently, she said cynicism was a 'cop-out' Australia could not afford.

'Cynicism and withdrawal serves the interests of those who would manipulate and control us.'

Ms Davies' completed her BA and Dip Ed at La Trobe University and was among the very first residents of Chisholm College in the early 1970s.

She won the Victorian State seat of Gippsland West in 1997 as an Independent. After increasing her margin in 1999, she played a pivotal role in State Parliament during the first term of the Bracks Government. ■

within the complex political management systems of the Murray-Darling Basin.

'Let us hope our egalitarian nature will prevail, extending in this instance to the natural environment of our river systems. Let us hope we are viewed as realists who made a sustained attempt to rehabilitate an ecosystem in trouble and succeeded, rather than vacillators in a parochial world of comfort and self interest with the "Sadim touch".' ■

For a copy of Dr Croome's speech, please telephone (02) 6058 3784.

*Next year, as part of its 'Research in Action' features, the La Trobe Bulletin will publish a series of articles on freshwater research and the ecological challenges of managing the Murray.*

## Student company aims for biotech market

La Trobe University postgraduate biotechnology students – with an eye to future entrepreneurship – have formed a company called 'Biotopya'.

The company has developed a product which they say will 'revolutionise laboratory management'.

Called 'LabMate', the product has two components: a quick, easy and durable labelling system for laboratory reagents; and a laminated, pocket-sized 'quick reference guide' for protocols and technical data required in scientific laboratories.

Biotopya is part of the Young Achievement Australia (YAA) business skills initiative sponsored by the Victorian State Government.

Students gain business experience by setting up companies, selling shares to raise capital and producing and marketing their own product. At the end of the year, the companies produce an annual report, are liquidated, with profits distributed to shareholders.

The company was launched and supported by Deputy Vice-Chancellor (Research), Professor Fred Smith. Its products have been well received across the University, by other industries – and by Agriculture Victoria's Plant Biotechnology Centre based on La Trobe's main Melbourne campus at Bundoora.

Plant Biotechnology Centre Director, Professor German Spangenberg, said: 'These promising young postgraduates are the future of science. Programs like this provide them with invaluable experience in the competitive biotechnology market.'

Biotopya Managing Director, Vino Pillay, says there are six student directors and 21 'employees'. They are competing against other teams in Victoria, hoping to become the most successful YAA Biotechnology Company.

La Trobe has long-standing links with YAA. It offers a one year subject for undergraduate students called 'Learning by Doing: Building an Enterprise'. ■

# Collaboration for better health care choices

The School of Public Health at La Trobe University is playing an important role in improving health care around the world.

Since 2000, it has hosted one of the 50 review groups of the Cochrane Collaboration – a unique multinational organisation which helps people reach well-informed decisions about health care by making available high quality, up-to-date systematic reviews of the effects of health interventions.

Accessible on the web, these reviews can be used by both health care professionals – and, importantly, by patients themselves – to answer questions about the effectiveness of health care.

Called the Cochrane Consumers and Communication Review Group, the La Trobe group specialises in information and communications which affect consumers' interactions with health care professionals, services and researchers. Other review groups focus on other aspects of health care.

The Cochrane Collaboration is named for Professor Archibald Cochrane, a Scottish medical researcher largely responsible for the development of epidemiology as a science, who died in 1988.

It was founded in Oxford in 1992 to help overcome one of Professor Cochrane's major concerns in health care delivery – that while a lot of research literature existed, few people were aware of its range or able to access it readily.

In 2000 the Cochrane Consumers and Communications Review Group was established in La Trobe's School of Public Health with Dr Sophie Hill as coordinating editor and Dr Megan Prictor as review group co-ordinator. Later Ms Judy Stoelwinder joined as trials search co-ordinator. Editors in Australia, the UK, France and the Netherlands contribute to the work of the group.

'Our group helps to maintain an on-line library,' says Dr Prictor. 'Researchers

prepare summaries of the latest evidence on the effects of medical interventions, and these are made available via the on-line Cochrane library. We also maintain a specialised register of randomised controlled trials relevant to the work of our group.'

La Trobe Public Health students assist by working with international review teams to assess trial evidence.

Core funding of \$200,000 annually for the La Trobe group comes from the State Government, with additional funding from the Federal Government.

'Our health care is very much concerned with the human side of medicine. We review the evidence of how best to communicate with people about their health and their health care,' says Dr Hill.

'For example, we are currently reviewing trials of interventions to prepare children for hospitalisation, medical procedures or other treatments. Melbourne's Royal Children's Hospital uses a simple but practical medium – calico dolls – to demonstrate to children in a friendly and non-frightening way, the procedures they are about to undergo.

'We are working with a consultant paediatrician at the hospital, and other stakeholders, to ensure the review is structured in a way that will make it useable to staff, young patients and their parents.

'Other recent systematic reviews have covered people with chronic diseases, primary care for older people and evaluation of adult mental health services,' she said.

Material in the Cochrane Library is now available to all Australians, following the purchase of a national subscription by the Department of Health and Ageing, negotiated by the Australasian Cochrane Centre and the National Institute of Clinical Studies – Australia's national agency for closing the gaps between evidence and practice in health care. ■



AusTOMs investigators from left. Front: Dr Unsworth, Ms Skeat, Professor Enderby. Rear: Dr John and Professors Morris, Perry and Duckett.

## AusTOMs unveiled

La Trobe University's Faculty of Health Sciences recently organised a one-day conference for 180 clinicians from across Australia to showcase and disseminate the results of the 'Australian Therapy Outcome Measures' (AusTOMs) project.

The project has been funded for the past two years by the Commonwealth Department of Health and Ageing.

AusTOMs was developed by a team of La Trobe researchers to provide a 'global snapshot' of the health status of people receiving therapy from speech pathologists, occupational therapists, and physiotherapists.

AusTOMs' principal investigator is Professor Alison Perry, with Professor Meg Morris, Dr Carolyn Unsworth, and Faculty Dean, Professor Stephen Duckett as chief investigators. Research associates included Ms Jemma Skeat, Drs Nicolas Taylor, Karen Dodd and Dianne Duncombe.

After obtaining input from the three allied health professions and their clients, the researchers trained clinicians in Victoria and assessed the reliability of the AusTOMs' tool.

Two associate investigators from overseas – Professor Pam Enderby and Dr Alex John from the University of Sheffield, UK – were guest speakers at the conference. They presented an overview of their work into outcome measurements of allied health in the UK's National Health Service. ■

Further details: Tel: 03 9479 1820 / 1821



From left, Professors Carroll, de Vaus, Phillips and Quispel.

# Personal Chairs for four new professors

La Trobe University has awarded Personal Chairs to four new professors – sociologists, Dr John Carroll and Dr David de Vaus; biochemist, Dr Don Phillips; and mathematician, Dr Reinout Quispel.

**Professor Carroll** is a prominent researcher in the broad field of sociology of culture with a particular emphasis on moral culture. His books include *Puritan, Paranoid, Remissive; Guilt – the Grey Eminence behind Character; History and Culture; Humanism – the Wreck of Western Culture; Ego and Soul – the Modern West in Search of Meaning; The Western Dreaming; and Terror – a Meditation on the Meaning of September 11*.

He has also edited various volumes and is a frequent writer of essays and newspaper articles. His work focuses on modern Western society, and in particular on the forces that alternatively hold it together and press towards disintegration. Earlier this year he chaired a review of the National Museum of Australia.

Professor Carroll hopes the personal chair will allow him to play a larger role in reinforcing one of the traditional strengths of La Trobe Sociology, the area of culture and social theory. He also wants to encourage wider community and national discussion of questions of culture, meaning and identity.

**Professor de Vaus's** research field includes family sociology, inter-generational relationships, and aging and family. He is a well respected international authority on social research methodology including both qualitative and quantitative studies.

He has produced a number of substantive studies on topics ranging from ageing, intergenerational relations and social networks. His book, *Surveys in Social Research*, now in its fifth edition, is

one of the leading works on this subject.

Professor de Vaus has conducted invited consultancies for the World Health Organisation and the United Nations, and is co-editor of the *Journal of Family Studies* and an editorial board member of several other journals.

Both Professors Carroll and de Vaus have been awarded Personal Chairs in Sociology.

**Professor Phillips** has an international reputation for his work on DNA binding of anti-cancer drugs and, in particular, the anthracycline family of drug molecules. The major focus of current research is to identify the molecular mechanism of the action of DNA-acting anti-cancer drugs and then to use this knowledge to develop improved treatment strategies, new derivatives and tumour-targeting approaches.

In 2002, Professor Phillips was awarded the first five-year ARC Discovery Grant at La Trobe University. He has been awarded a Personal Chair in Biochemistry.

**Professor Quispel** has played a leading role in computational mathematics and is internationally recognised as one of the founders of the modern theory of geometric numerical integration of differential equations, having invented and improved several of its main methods including symmetry-preserving, volume-preserving, integral-preserving and dissipation-preserving integrators.

He has played an influential role in the analysis of discrete versions of integrable soliton systems. Other highlights of his research include the discovery of a method for obtaining discrete integrable solution equations and many integrable maps including the so-called QRT map. Another area of research interest has been

dynamical systems and chaos. He has been awarded a Personal Chair in Mathematics. ■

## THREE NEW FACES ON UNIVERSITY COUNCIL

Three new members have been appointed to the University's Council, La Trobe's top governing body. They are:

**Dr Gaye Sculthorpe**, Head of Indigenous Cultures at Museum Victoria – and La Trobe University's first Aboriginal PhD graduate in 1997. Dr Sculthorpe also serves part-time as a Member of the National Native Title Tribunal and as a Commissioner of the Australian Heritage Commission.

**Ms Catherine Ng**, a member of the Melbourne City Council and General Manager, Angliss Consulting Pty Ltd. Ms Ng is also an active member of the Chinese community; and **Mr Alex Tolias**, President, Victorian Division, Hong Kong-Australia Business Association. ■



Dr Sculthorpe, above right, Mr Tolias and, inset, Ms Ng.

# Honour for pioneer of chemical arms control



One of the world's leading figures in chemical and biological arms control, Dr Robert Mathews, has been awarded an honorary Doctor of Science by La Trobe University.

Dr Mathews, a scientist at Australia's Defence Science and Technology Organisation, helped forge the United Nation's

1992 Chemical Weapons Convention – the first comprehensively verifiable multilateral arms control treaty to lead to the complete banning of an entire class of weapons. He continues to provide scientific and technical support to the Organisation for the Prohibition of Chemical Weapons based in the Hague.

The organisation is responsible for administering the Chemical Weapons Convention, including verification, and employs some 500 personnel including 200 weapons inspectors.

Involved in developing new international arms control law, Dr Mathews also works closely with officials in countries in South East Asia. In 1999 he became an inaugural member of Foreign Minister Alexander Downer's National Consultative Group on the Biological Weapons Convention and has been awarded an Order of Australia (OAM).

Dr Mathews honed his interest in mass spectrometry and artificial intelligence at La Trobe in the early 1970s while studying for his Master of Science degree in the Department of Chemistry.

Speaking to graduates at a recent ceremony where he was awarded his honorary degree, Dr Mathews said: 'While there may be no harm in pausing briefly to reflect on the various achievements in

arms control – with the end of the cold war they have arguably made the world a safer place – there is certainly no room for complacency.'

He said that one of the aims of arms control was to reduce military budgets, with part of the savings used as a 'peace dividend' to assist development programs and poverty eradication.

'This highlights an area where arms control has clearly failed, at least so far.'

Dr Mathews also works closely with the Australian Red Cross on arms control issues, including their efforts to ban anti-personnel landmines.

He noted that challenges facing the world at the beginning of the 21st Century included increasing levels of military expenditure and trade in weapons, despite the end of the Cold War (in 2002, the total world military expenditure exceeded 800 billion US dollars) and the increasing number of civil wars, with horrific numbers of civilian casualties.

Dr Mathews also commented on the changing security environment, 'dramatically exemplified by the events of September 11, 2001, as a result of the increasing resort to terrorism by disaffected groups'.

'In my view, this trend is at least in part a result of the inability of the international community to adequately address the increasing gap between the 'rich nations' and 'poor nations'.

## Friendly interaction between staff and students

Dr Mathews came to La Trobe in 1971 to carry out postgraduate research with Professor of Chemistry, Jim Morrison.

'Two things about this University have left a lasting impression with me – the very friendly interaction between staff and students, and the flexibility of the researchers.

'I was encouraged to spend time getting to know the researchers and discussing the various research projects, and I was then given the opportunity to develop my own research project, based on my own

particular interests. Indeed – even more so in retrospect – I realise how very fortunate I was to have studied here.'

These studies led Dr Mathews to develop computerised pattern recognition methods which were adapted for use by defence laboratories in Australia, the USA and UK to detect and analyse chemical warfare agents.

Following the extensive use of chemical weapons in the Iraq-Iran war, these methods were further developed, and were subsequently extended to include biological agents. Much of this work involved collaborators from La Trobe.

While much of his focus today is in the area of international arms control law, he continues to have a keen interest in mass spectrometry, and says he plans to continue collaborative research with colleagues at La Trobe. ■

## Robert Dunster – leading architect and planner

Robert Dunster – Director and former Chairman of the leading Melbourne architectural firm, Bates Smart and McCutcheon – has been awarded an honorary degree, Doctor of the University, for his services to architecture and the physical development of La Trobe's campuses.

Dr Dunster has worked in Australasia, Europe, South America, the United States of America and Canada on projects which include the Australian Chancery in Washington, D.C., the Sydney Cove Redevelopment, and Collins Place in Melbourne. He was Chairperson of the

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## Slavery, emancipation and war in another era

keynote speaker at La Trobe's annual North American Studies Symposium. The theme of the symposium was 'Race, gender, and memory in the era of the Civil War'.

The symposium featured papers by overseas and local scholars, including three former postgraduate students of La Trobe University. Two of these, Dr Giselle Roberts and Dr Keith Wilson, have had books on aspects of the Civil War published this year.

Professor Berlin is 'Distinguished University Professor' in the Department of History at the University of Maryland, where he was formerly Dean of the College of Arts and Humanities. He has also just concluded a term as President of the Organization of American Historians.

Sole and co-author of a many books on the history of slavery, emancipation and the Civil War, his articles and reviews have appeared in newspapers and journals including *The New York Times* and *The Washington Post*.

His books have won numerous prizes including the Bancroft Prize, in 1999, for *Many Thousands Gone*. ■

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### Admiring wildflowers

the taxon – or plant category – to which they belong. The grains can be used help identify plants species down to family, genus and sometimes even species.

This ability of identifying plants from pollen is used widely in science and industry – including quality control of honey, forensics, paleo-ecological studies and plant taxonomy.

Pollen also may help answers questions about distribution and composition of Box-Ironbark flora in recent and ancient times. Highly resistant to decomposition, pollen grains can be extracted from old sediments, possibly revealing something about the extent and composition of Victorian Box-Ironbark forests long before European settlement. ■

*For further details on:*

[www.bendigo.latrobe.edu.au/boxironbark/](http://www.bendigo.latrobe.edu.au/boxironbark/)

**W**ith world attention on terror and war in Iraq, a group of La Trobe University historians recently shifted their focus to conflict in another era – the abolition of slavery and the American Civil War – hosting a visit by one of America's leading scholars of early America, Professor Ira Berlin.

A Clinton appointee to the US Advisory Council of the National Endowment for the Humanities, Professor Berlin was a consultant to Ken Burns' highly acclaimed television documentary *Civil War*, shown in Australian in the early 1990s.

He delivered the annual Bernard Bailyn lecture, titled *American slavery in history and memory*, and was also be awarded an honorary degree, Doctor of Letters, by the University. Professor Berlin was also the

*Continued from page 14*

La Trobe University's Building Committee and a member of University Council from 1991 to 2002.

During this time, the committee oversaw many major projects on the University's main Melbourne campus and on its Research and Development Park at Bundoora; the development of the heritage-listed campus at Beechworth; and the transformation of the greenfield campus at Albury-Wodonga. ■

### Ian Thornton – the world was his laboratory

The late Emeritus Professor Ian Thornton, key figure in the formation of Biological Sciences at La Trobe University, has been awarded the honorary degree, Doctor of Science, by the University for his

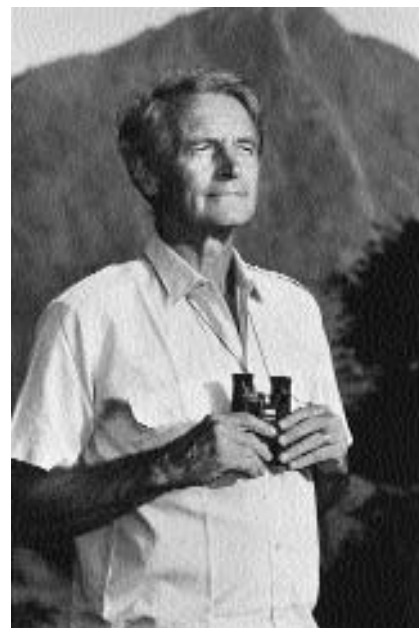
significant contribution to the University, teaching and the sciences.

A Fellow of the Australian Academy of Science, he was Foundation Professor and Head of Zoology from 1968 until his retirement from the University in 1991. He also served as Chairman of the School of Biological Sciences and Acting Vice-Chancellor.

Professor Thornton died late last year, aged 76, after a brief illness. His scientific publications include several books, among them *Darwin's Islands* and *Krakatau – The Destruction and Reassembly of an Island Ecosystem*, the latter based on research expeditions involving more than forty scientists from six countries that he led to the Indonesian volcanic island of Krakatau in the mid 1980s.

In 1997, he turned his attention to volcanic Long Island, north of New Guinea, leading an international expedition there in 1999. Results from this

appeared in 2001 in a special issue of the *Journal of Biogeography*. ■



Professor Thornton on the Indonesian island of Krakatau. His obituary appeared in the November /December 2002 *La Trobe Bulletin*.

# Admiring wildflowers in the name of science

What luck! This spring Dr Katherine Legge and Dr Sabine Wilkens found time during work hours for that most tranquil activity – admiring wildflowers.



They were delighted. It had been the best spring in several years for flowering in the Box-Ironbark forest areas of La Trobe University's Bendigo campus, thanks to the breaking of the drought.

But their activities were strictly in the name of science. Dr Legge, a lecturer in physics and Dr Wilkens, lecturer in biology, were gathering pollen for scientific classification and research.

The two scientists are putting together an internet database of pollen from plants in central Victorian Box-Ironbark forests, of which there is very little left – and what remains is fragmented and degraded.

This is the third spring that they have gathered flowers and extracted pollen. Their database now has images of pollen from 32 plant species including five acacia, five daisies, four lilies, five peas, two orchids and other families

La Trobe's Bendigo campus is next to One Tree Hill, part of the newly created Greater Bendigo National Park. The park has so far revealed more than 250 flowering plants, but the total number for Box-Ironbark forests and woodlands is estimated at over 1500.

While a permit is required to gather flowers from Box-Ironbark forests in national parks, there are no restrictions on private land or the University campus – unless dealing with rare or endangered plants.

The researchers are fortunate in having such easy access to the forest, as they have

to work quickly. Some species only flower for a few days – and may not do so again for several years.

'This year the rain came at the right time and the wildflowers were just fantastic. We have seen flowers that have not been seen for years,' Dr Wilkens said.

Pollen is produced by all seed-bearing plants. Flowering plants (Angiosperms) produce pollen in sacs within the flower. When mature, pollen may travel on the wind or be carried by insects, birds and mammals to another flower where it fertilises the ovules, resulting in the formation of seeds.

Dr Legge has built the web page to display information and images of Box-Ironbark plant species and their pollen. She prepared the scanning electron microscope images, and the light microscope images were contributed by biology lecturer, Mrs Mary Boelen.

The web page allows for different levels of users. A table of images can be used to identify pollens on the basis of their morphology. Others are arranged under the plants' scientific family name, species, and common names.

While gathering and classifying pollen is a scientific objective in itself, the database might help other researchers learn more about pollination agents and about the mechanism of pollination.

Pollen grains are microscopic, with highly complex structures characteristic of

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