

# MASSEY

The magazine for alumni and friends of Massey University • Issue 17 • November 2004

A man with grey hair, wearing a black suit, is crouching next to a bright orange and yellow sports car. He is smiling and has his hand on the front wheel. The car is sleek and aerodynamic, with a large rear wing and multiple headlights. The background is a clear blue sky with some clouds.

## Making his Marque

Tony Parker and the supercar to be

A man and a woman are sitting on a stone path in a garden. The man is wearing a blue sweater and light-colored trousers, and the woman is wearing a dark jacket and light-colored trousers. They are both smiling. There are green plants and flowers around them.

## Gardening for Gold

Success at the Chelsea Flower Show



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This editorial might make good meal time reading. This issue of *MASSEY* goes to press after I have just returned from the Massey University New Zealand Food Awards, a biennial event held this year at the North Shore Stadium conference centre. This year's winner of the Premier Award was Heinz Wattie with a single serve, instant Tuscan tomato soup made with a concentrate of fresh Hawke's Bay tomatoes. And please don't be swayed by your experience of instant soups to date – this soup really does taste fresh and it should find a ready market. Writing recently in *New Scientist*, Professor Jules Pretty of the University of Essex put the average preparation time for a family meal at six-and-a-half minutes, as against the two-and-a-half hours of 50 years ago (though whether this is a purely British statistic she does not say). Moreover, we know that there are more and more single person households. As a delicious, fuss-free product that single serve sachet is a good fit with societal trends.

As well as being good news for time-pressured lovers of tomato soup, the Premier Award product will also benefit farmers and the economy of Hawke's Bay. Traditionally, New Zealand has been an exporter of food commodities. But to be a pure commodity exporter is, at best, a risky business. A commodity from one country is likely to be hard to distinguish from one from another. Does it matter to you as a consumer whether your tomatoes were canned in Italy or Hawke's Bay? To be a commodity exporter is to be shackled to the whims of the market, to be a price taker not a price setter.

Heinz Wattie is far from alone in being an innovative food company, with this year's Massey University New Zealand Food Awards attracting 132 entries. More generally, a study commissioned by New Zealand Trade and Enterprise and carried out by Massey's Professor Ray Winger showed that in 2003 New Zealand food exporters added value to 53 percent of their products, up 7 percent on 2002 and 17 percent on 2000, when just under 45 percent of food exports were value-added. In 2003 value-added food products generated \$7.6 billion in export income.

This study, however, measured only the value-added work carried out in New Zealand. Add in figures such as the value that Fonterra adds to

its dairy products in its international manufacturing operations and the percentage climbs higher still.

From where does the New Zealand food industry draw its expertise? To a large degree from Massey's Institute of Food, Nutrition and Human Health, which has a 40-year history and an international reputation. Anyone who attends the Food Awards is likely to find groups of Massey alumni gathered together and reminiscing.

One of the Institute's former heads is Professor Paul Moughan, who now heads the Riddet Centre, one of New Zealand's new Centres of Research Excellence. Named after Massey's Professor William Riddet, the founding father of food science in New Zealand, the Centre focuses on research and education in that realm where food, science and human nutrition intersect.

As you can read in this publication (see page 18), Professor Moughan's work and interests show that the future of food and the New Zealand food industry lies not just in improving existing products but also in creating entirely new products, sometimes in entirely new categories.

You may have heard of nutraceuticals or functional foods. Both categories are beginning to find space on your supermarket shelves. These are foods engineered to confer particular benefits, such as spreads that promise to lower your cholesterol. This stepping beyond simply processing food to actually creating new food with particular qualities has been described as a new paradigm.

A fresh frontier lies open. We know surprisingly little about the intricacies of human nutrition, let alone the complexities of how our nutrition interacts with our individual genetic inheritances. Professor Moughan is in the exciting situation of doing fundamental research that is at once fascinating and near certain to lead to practical applications.

Will functional foods oust the foods we have grown up with? Unlikely. Functional foods are likely to supplement rather than supplant traditional diets.

Professor Moughan's work and that of the Riddet Centre will benefit both New Zealand and consumers. For New Zealand, the result should lead to a competitive advantage. For consumers, the result will be food which, in Professor Moughan's words, "will taste delicious and be good for you".

**Judith Kinnear**  
Vice-Chancellor

## CASE NOTES



The handsome leather briefcase promised to one lucky contributor to *MASSEY*'s notes and news section will go to Ross Crawford, Bachelor of Aviation 2004, a flight instructor with Air New Zealand.

The draw was made by Paula Taylor, manager of the Alumni Relations Office, who expressed her pleasure at the willingness of Massey alumni to stay in touch with their community. In this issue's notes and news her favourite is the entry from veterinary science graduate Sai San Aik, who is working in Myanmar. Sai

San Aik extends an invitation to any Massey alumni travelling through to get in touch.

To send in your notes and news you can either return the form enclosed with this magazine, or you can visit the alumni and friends website (<http://alumni.massey.ac.nz>) and send in your news online. Photos are welcome.

*We look forward to hearing from you.*

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## CONTRIBUTORS



Opotiki-born Tane Aikman has just finished a postgraduate diploma of journalism at Massey's Wellington campus and is now working for *The Wellingtonian*. Tane writes about Tony Parker and his supercar and about Massey's cardiac rehabilitation programme.

## NEXT ISSUE



We travel the world with Alison Balance and meet Peter Hayden, both Dunedin-based documentary film makers with *Natural History New Zealand*. Plus we talk to Alan Badley, a world expert on 18th century music.

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# Watching the Iraq war

## THOUGHTS

*Piers Reid, a senior lecturer at the Centre for Defence Studies, writes.*

Iraq dominates the world news and may decide the forthcoming United States election and Tony Blair's political survival. At one extreme, commentators like Robert Fisk see the struggle in Iraq as a Western grab for oil and deliberate destabilisation of the Arab states, cloaked in a scare campaign about weapons of mass destruction. Others, like Ann Coulter, view the fight as a necessary step towards securing democratic freedom throughout the world and a response to global terrorism. Many others believe Iraq to be a Vietnam-like quagmire, producing a trickle of casualties, which will eventually exhaust the United States' will to stay in the region.

This is the fourth war fought in the Persian Gulf in the last 20 years. The first Gulf War between Iran and Iraq lasted eight years with nearly a million deaths. The second in 1990/91 saw the spectacular ejection of Iraq from Kuwait. The third in 2003 involved the invasion of Iraq, its occupation by a coalition of primarily United States and British forces and the overthrow of the Ba'th regime led by Saddam Hussein. This fourth Gulf War involves the occupying forces and Iraqi progressives seeking to stabilise the nation as a democracy in the face of fundamentalist resistance.

Whether a democratic form of government is suitable or possible in Iraq is a matter of debate, no matter how much it may appeal to the West and the United Nations. The Coalition partners argue that the Iraqi people should be given a chance to choose their own government free of religious, ideological and terrorist intimidation. The attacks on the fledgling instruments of a restructuring Iraqi government, especially its police force and civil service, underline the desperation of extremists to ensure such a choice does not take place, or that any resulting government will be stillborn.

To the general public watching daily live coverage of bombings and shootings in Iraq, the situation seems totally out of control. Yet to the military observer, when compared with, say, the scale of the Vietnam War, the violence in Iraq appears small and even manageable. The fighting is largely limited to just five urban centres, appears to have no support outside the cities and directly affects only a very small percentage of the population. Most Iraqis are simply involved in rebuilding their country and their lives.

The ubiquity of television reporting and the brutality of the methods used, such as suicide bombings and internet-screened decapitations, add



a disturbing propaganda dimension, but are hardly decisive. It is difficult to take seriously the calls for national policy changes from the relatives of hostages, especially when those hostages have gone willingly into the war zone against their own government's advice. Equally it would be irresponsible to let foreign hostage-takers decide national policy. Surrender to hostage takers would simply invite repetition of the tactic, probably on a larger scale. What will be decisive in Iraq is whether the occupying powers have the will to see through the nurturing of democratic government and then let that government deal with the internal security issue.

The resistance in Iraq is not exclusively from Iraqis. Instead, Iraq appears to have become a battleground in which foreign guerillas have joined extremist Iraqi Muslims and Ba'th elements. While their aims often do not coincide, there is a common desire to defeat the Coalition. As with Afghanistan, Iraq has become a battlefield of choice, attracting the shady 'terrorist' organisations from throughout the Arab world. But by doing this they may be revealing themselves and playing into Coalition hands.

The political – and therefore military – problem confronting the Coalition is how to deal with the resistance while simultaneously building effective government in Iraq. That the current fighting is different in its nature to the three previous wars is obvious. But as military analysts are aware, no two battles or two wars are ever identical. What works in one battle may not work in the next. Wars cannot be seen as linear, as predictable and replicable. They

remain a frustrating mixture of science and art, defying modelling techniques. So what will work for the Coalition in Iraq?

Many universities, including Massey, and most armed forces, including the New Zealand Defence Forces, have established centres to analyse past and present wars, technology advances and so on, to learn and postulate from these. In these centres rigorous intellectual debate is encouraged, new theories are expounded, modelling is undertaken and operational doctrines are forged. The operational doctrine of Airland Battle, a methodology for fighting conventional battles, was expounded in the 1980s and adopted for the successful 1991 ground offensive to liberate Kuwait. The doctrine of Rapid Dominance, popularly known as 'Shock and Awe', was developed in the 1990s. Reliant on small but technologically powerful 'network-centric' forces supported by massive aerially delivered firepower, this latter doctrine underlay the swift invasion of Iraq in 2003. Iraqi conventional forces, little changed from 1991, stood no chance against this superior form of warfare and deserted in their thousands.

Neither of these doctrines fits the situation in present-day Iraq, which is one of internal security against a high-level terrorist threat seeking to destabilise through fear. Terrorist success would inevitably lead to a chaotic civil war among Shi'a, Sunni and possibly the Kurds, as well as between religious zealots and those promoting a secular society. The guerillas calculate that civil war could result in an extremist Muslim theocracy. Their campaign has caused over a thousand Coalition deaths and many more Iraqi deaths. Their innovative demands for hostages' lives have broken weaker Coalition partners, and a well-timed terrorist attack in Madrid contributed to Spain's retreat. This is not a guerilla campaign that is about to lose momentum, nor do they have any reason to abandon terror tactics.

Guerilla wars have long been the Achilles heel of powerful empires. Western societies are profoundly polarised when faced with paying a political cost with their young people's lives. Confronting the threat in Iraq therefore requires a new equation for the application of political and military power. Brute force alone cannot be used because the Coalition and Iraqi Government forces, unlike the guerillas, act within the restrictions of humanitarian law. Tighter security and checks are required, but this restricts the very individual



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freedoms the Coalition claim as their purpose.

As with conventional warfare doctrines, new methods of counter-guerilla warfare have been developed. These involve high-quality intelligence, rapid military response capacity, total local nation involvement and parallel nation building. An ability to adapt to the environment is crucial. Knowing the enemy – his location, intentions and capabilities – is a key requirement. Precision-guided weapons require precise intelligence to be effective. In conventional operations this comes from electronic sources, ranging from satellites to palm-sized flying electronic eyes. In counter-guerilla operations, human intelligence is the key – some reliable informant providing accurate, timely information about the enemy. In Iraq various underground resistance movements defied Saddam's detection for two decades and mastered the techniques of independent cell structuring, something that has served Hamas and the IRA well. Similarly, the guerilla forces are not a single cohesive organisation but a mosaic of separate cells with often quite different loyalties, united only in their willingness to use terror. The identification of the guerillas therefore will be no easy task and requires Iraqi involvement.

There appears no possibility of an early end to the terrorism in Iraq, but despite the setbacks the Coalition methods appear to be slowly working. Early Coalition mistakes, such as the dissolution of the Iraqi armed forces and police, are being rectified. The infrastructure is being rebuilt and, to the pique of many liberal observers, encouraging signs of a rebounding economy and society can be seen. Despite the media attention, the fighting and the casualties are of a very low order for the restructuring of a nation of more than 20 million people after decades of dictatorship and brutality. There will be an increase in violence as the elections near, but that should be the peak. The United States shows no signs of tiring and both President Bush and John Kerry have affirmed their intentions to persevere.

Sadly, Iraq, like Afghanistan, is a test-bed for the new guerilla-fighting doctrines and techniques. How well these are working is not yet clear, but they are being monitored and analysed at centres around the world, including the Centre for Defence Studies at Massey. Their effectiveness or otherwise will influence the techniques of the global War on Terrorism for years to come.



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## The unmentioned minority

*In the April issue of Massey Magazine we published an essay by Danny Keenan, entitled "The unmentioned minority".*

Dear Sir,

History lecturer Danny Keenan makes surprising claims about Pakeha men (MASSEY, April 2004, p.3).

He describes Pakeha males as a distinct "racial minority". This in itself is puzzling, but is even harder to comprehend when he does not also divide Maori into male and female races.

He writes that they, "still control as much as 90 percent of our wealth and power", and they "possess an almost total dominance".

It is hard to see how such a claim can be made given available evidence. In 1990 the NZPC suggested that the share of wealth held by women in New Zealand in 1980-81 and 1987-88 were 30.5 percent and 38 percent respectively.<sup>1</sup> Even if all the rest was held by Pakeha men, they would have had far less than 90 percent. The NZPC also noted a general upward trend in the share held by women, and linked this to matrimonial property legislation. The unrealised claims of those in ongoing marriages should also be considered. A spouse may have a legal claim over assets, such as superannuation, listed in the other spouse's name.

More recently, an "equal worth" study provided results using 1996/97 New Zealand data.<sup>2</sup> By that measure, women appeared to have over 46 percent of total wealth, again ignoring some unrealized claims. Since then, changes under the Property Relationships Act (1976) have generally further favoured women.

Although Dr Keenan's essay appears to be questioning the status quo, I believe it is conforming with a new and damaging orthodoxy that does not withstand closer examination.

Yours sincerely,

Stuart Birks

Director, Centre for Public Policy Evaluation  
Massey University  
Palmerston North

1. *Income Distribution Group (1990) Who gets what? : the distribution of income and wealth in New Zealand*, Wellington: New Zealand Planning Council

2. *Equal Worth: Women's Economic Status Report*, <http://www.women.nsw.gov.au/equal/equalworth4.html>



# Hodgson's view

**We put Pete Hodgson, Minister of Research and Development  
(and a Massey alumnus ), to question.**

When Pete Hodgson was a veterinary student his classmates and lecturers regarded him as straightforward, quick-thinking, and possessed of a keen sense of humour. Thirty years after his graduation with a degree in veterinary science, his friends, colleagues and constituents say the description still fits. He is regarded as an informed, able and accessible Minister of Research, Science and Technology, Energy, Fisheries, Forestry and Crown Research Institutes.

Born and raised in Whangarei, Pete Hodgson practised as a vet in Canterbury in the early 1970s and in England in the early 1980s. He has also worked as a high school science and mathematics teacher and manager of a range of small businesses.

His involvement in politics began in the late 1980s, when he was employed by the Labour Party as a marginal seats organiser. He has been the MP for Dunedin North since 1990.

## *What do you remember of your time at Massey?*

Well, they were my formative years of course and so I remember them very warmly indeed, and many of my friends in life are friends I made here. The veterinary degree was a very exacting degree and had a high attrition rate and so we kind of knew that we had to knuckle down to get through. I missed a year, unfortunately. It was because of too many parties in Burke Street and deciding to jump goods trains between finals, which was not a good idea. That aside, I have very fond memories of Massey indeed and come back here often.

## *How is it you came to politics?*

I don't know. I don't know why a person would go from veterinary science into politics, but I think politics is in my blood and it just is in some people's blood. I gave up veterinary science and worked for the Labour Party, for goodness sake. This is a serious case of having politics in your blood.

## *Yours is a political family?*

No, it's not. It's not. My wife's apolitical, my children are apolitical, my parents are barely political. If I reach back far enough I can find a grandfather but he was involved in a thing called the Country Party and only for about six months, so I don't think that counts either. No it's not a political family. It's really interesting. I don't know where it came from. I mean, I am highly political.

*As Minister of Science and Technology, you are known to be a strong advocate for research and development. Nonetheless, given our relativities with other nations, is the Government doing enough to support, and acknowledge our best researchers and retain them in New Zealand?*

Well, how long can you give me to answer? We've increased science funding nominally by around 42 percent over the last five budgets. In real terms, taking out inflation, that's 32 percent. So that's quite a chunky increase. One of the features of the New Zealand innovation system is that it's dominated by the public sector. So whereas our investment in science is just slightly below the Western world average – 10 percent below where it should be probably – private sector investment in R and D is around about a third of the Western world average. So we've got a very unusual mix between public and private sector that is both a symptom and a cause of our stage of economic development.

## *In what way?*

On the one hand it's a symptom in that New Zealand is a very high-quality agricultural primary production nation – and primary production research tends to be a small part of industry turnover in the agricultural sector – smaller than, say, research towards building aeroplanes or making drugs. But the agricultural research that we do produce is amongst the world's best. That's why our economy is so strong in agriculture. It's a symptom of our stage of economic development because there's more primary production going on here than in any other Western nation and less of the manufacturing or so-called high-tech sectors.



**Whereas our investment in science is just slightly below the Western average . . . private sector investment in R and D is around about a third of the Western world average.**





## Universities are the biggest aggregate providers of research



And then it's a cause of our economic development because our attachment to commodities, no matter how good we are at it, has meant that our standard of living has dropped relatively over my lifetime. I was born into the third richest country in the world. I currently live in the 21st richest country in the world, and our attachment to agriculture has been part of that change. So the Government's primary focus has to be to ensure an increase in private sector involvement in R and D through a thousand different ways. And we have made some progress on that.

### *What should we be doing to support and retain our best researchers?*

One answer is to increase the demand for research by increasing private sector investment in research. That's a really boring answer. It's not one that people would immediately come to but it's the one that's at the top of my mind. And then the other way is simply to increase available funding on the public sector side, giving it the attention that we've put into excellence with the Centres of Research Excellence. There's also the work that we've done with the scholarships, the post-docs and things that have just rolled out over the years, including the celebration of young New Zealand scientists. One example is the Foundation for Research, Science and Technology award dinner in Auckland in July.

### *Do you think companies should be conducting their own research or commissioning it out? Should Fonterra, for example, be doing its own research or relying on AgResearch?*

Answer to that specific question? Both. Fonterra – we were there yesterday – is the largest private sector investor in New Zealand. Of course they should be doing some of their own research. They have a long history of it, starting with the Dairy Research Institute – which now goes by the name of Fonterra Marketing and Innovation, you'll be pleased to know. On relying on AgResearch? Well, the dairy research/AgResearch linkages have been insufficiently strong in New Zealand – it's been a matter of some distress to me actually. But recently, quite recently, they have improved significantly and so now it can be both. Let's make sure we don't try to put black/white questions around science because you very rarely get black/white answers.

### *If you were an international biotechnology company or investor, how do you think you would view New Zealand as a place to do business?*

I would say: It is very, very far away and it is very unknown, therefore it's a hard place to do business. However, as I got here, and given that I have only

just arrived and been here a month, I'm surprised by two things. First of all I'm surprised by the quality of New Zealand science. I'm very impressed by the quality of New Zealand science and the range of that science, especially related to technology and in all of the applied biologies. And I find it all undervalued, which delights me a lot. This is an inefficient market. Now that I've arrived here I'm probably going to be able to get hold of intellectual property cheaper than if I were trying to get hold of it in San Diego. So – you know, the plane flights are a real problem – but I'm coming back.

### *Many scientists believe the HAZNO [the Hazardous Substances and New Organisms Act] and ERMA [the Environmental Risk Management Authority] processes are onerous and may be stifling innovation or changing the nature of research that is done. Do you think legislation strikes the right balance between providing environmental protection and allowing innovation?*

I think probably there will be instances where our decision to run the most transparent, precautionary and participatory regulatory system that I know of has stifled innovation or changed the nature of the research that's being done. I think that is true and I think that all around the world biotechnologies are doing that to societies.

It's relevant that we are now seeing an amazing debate going on over stem-cell research. For example, the southern states of the USA don't like it. The northern and western states don't seem to mind it. Go to Australia and you also find a mix but geographically the other way round. They've embraced stem-cell research in Victoria much more than they have in Queensland.

Then there's xenotransplantation which is causing nervousness in some places but not in others. Prince Charles has decided to get himself distressed about nanotechnology, now that he's learnt how to spell it, and so on. You end up with a variety of societal reactions to technologies. The New Zealand reaction to nuclear technology is a very good example. I'm not in the least bit critical of and entirely supportive of (I should say in brackets – in case there's any doubt) the anti-nuclear argument. But one thing I'd like to say about this is that generally speaking the first round of genetic engineering is of not much use to New Zealand. All of the technologies about Round-Up Ready soy or Round-Up Ready cotton or Round-Up Ready maize or Round-Up Ready, call it what you like really, are fine. We don't grow soy or cotton in this country. We do grow some maize but we don't grow much.

But there's a bunch of technologies, GE technologies, that could be wildly useful in New Zealand, in producing energy out in the environment. What the antagonistic, anti-GE people call terminator genes, I think are great things. If we can apply a terminator gene to a tree so that it doesn't have pine cones then we don't have to put up with pollen. We don't have to put up with the energy going into producing flowering bodies instead of wood. And we don't have to put up with wilding pines marching across the hills around Queenstown. That will do me. And to that sort of research, I think New Zealanders will say, okay, now we can see a benefit and no dis-benefit: after all, the thing can't reproduce, by definition.

### *Given the Government's ambitious goal of returning New Zealand's per capita income to the top half of the OECD through the support of research-intensive areas like ICT, biotechnology and creative industries, why aren't we seeing this matched by Government research investment that is higher than the average OECD levels? The OECD average is 0.67 percent of GDP, Australia's is 0.71 percent, New Zealand's is 0.54 per cent.*

Someone's done their research there. Very good. And I agree. We are a little behind the pace in our public sector R and D. We've caught up somewhat because I've been pouring money into it. But because the economy has been growing very strongly, GDP is growing and the percentage of GDP figures have therefore been more modest than they should be. Guilty as charged; we are below the average.

Again, our big problem is not public sector investment, it's private sector. So I've doubled the amount of money going into technology for business growth so as to get private sector funding up with help from Government. We've changed tax laws and we're going to have to change them again, I can just see it, especially for venture capital.

Universities are the biggest aggregate providers of research – only just but they are – and they employ increasing numbers of researchers whose careers are at risk from fixed-term R and D contracts. But if you go and have a look at the books of a Crown Research Institute, they don't have any of the room to move that a university has. Apart from the fact that they have a commercial objective on them, they have to earn the rated average cost of capital etc. Leaving that to one side, they don't have teaching research funding. They don't have benefactor funding – you know, trusts where people make over their estates to the universities. So university balance sheets are generally somewhat easier to manage than a Crown Research Institute balance sheet.



## Honours and appointments

Professional artist and academic **Professor Sally Morgan** has been appointed to head the University's College of Design, Fine Arts and Music. She held a senior academic management position at the University of West England before taking up the roles of Professor of Fine Arts and Head of the new School of Fine Arts at Massey University in 2001.

**Professor Ian Watson**, retiring Principal of Albany campus, has been awarded an honorary Doctorate of Science. At the College of Sciences ceremony, Professor Paul Spoonley said Ian had touched many and all spoke highly of his understanding and humanity.

Former Assistant Vice-Chancellor (Academic) **Professor Graeme Fraser** has been appointed to the board of the Tertiary Education Commission. Associate Education Minister (Tertiary) Steve Maharey said Professor Fraser would bring his considerable governance and management expertise.

Vice-Chancellor **Professor Judith Kinnear** has been appointed to the board of the Foundation for Research, Science and Technology. Also appointed was businessman and Massey alumnus **Craig Norgate**.

**Professor Neil Pearce**, Director of the University's Centre for Public Health Research in Wellington, has been awarded the University's highest award for science. Research director Professor Nigel Long says the Doctor of Science degree has been conferred on Professor Pearce because of his work on epidemiology methods and their application in research into non-communicable diseases.

**Geoffrey Annison** has been appointed head of the Institute of Food, Nutrition and Human Health. Professor Annison comes from Sydney, where he was the Research and Technology Director for Goodman Fielder Ltd.



Professor Sally Morgan



Professor Ian Watson



Professor Graeme Fraser



Professor Judith Kinnear



Professor Neil Pearce



Geoffrey Annison



## Rutherford Medal to Professor David Penny

Professor David Penny has been awarded New Zealand's top science honour, the Rutherford Medal, by the Royal Society of New Zealand.

Professor Penny has made significant contributions to theoretical biology, particularly in the area of molecular bioscience. His studies in molecular evolution and mathematical biology focus on the fundamental basis of DNA analysis, and range from evaluating how changes in DNA are involved in evolution, to studies of the origin of life and patterns of human origins and dispersal.

He is a co-director of the Massey-based Centre of Research Excellence the Allan Wilson Centre for Molecular Ecology and Evolution.

Professor Penny was born in Taumarunui and studied Chemistry and Botany at what was then the University of New Zealand (Canterbury University College), before receiving his PhD from Yale University.

He returned to New Zealand in 1966 to take up a lecturing position in Palmerston North. During his 38 years at Massey, Professor Penny has taken a number of sabbatical leaves to overseas institutions, including the University of Cambridge, and Oxford University.

## Massey medallists

Many of Massey's top research staff and academics attended an inaugural dinner at which the Vice-Chancellor's Excellence in Teaching Awards and the Massey University Research Medals were presented.

The Massey University Research Medals, the highest award the University can bestow on researchers, were introduced earlier this year to recognise outstanding contributions.

The winners of the 2004 Vice-Chancellor's Excellence in Teaching Awards were Dr Richard Shaw, School of Sociology, Social Policy and Social Work; Dr Doug Stirling, Institute of Information Sciences and Technology; Dr Richard Buchanan, Department of Marketing; and Dr Bill Anderson, Dr Mary Simpson and Marion Orme from the College of Education who received a group award.

The Massey University Research Medal for an Outstanding Individual Researcher was awarded to Professor David Parry, Head of the Institute of Fundamental Sciences. The Research Medal for a Supervisor went to Associate Professor Kerry Chamberlain from the School of Psychology at Albany. Dr Jeroen Douwes, Centre for Public Health Research and Dr Ulrich Zuelicke, Institute



of Fundamental Sciences, were awarded Research Medals for Early Career researchers, while the Allan Wilson Centre for Molecular Ecology and Evolution won the Team Research Medal.

**Clockwise from top: The Allan Wilson Centre, Associate Professor Kerry Chamberlain, Dr Jeroen Douwes, Professor David Parry, Dr Ulrich Zuelicke.**

## No fee increase for 2005

There will be no increase in tuition fees for Massey University domestic students in 2005. The decision by the University's Council means that fees for undergraduate, taught postgraduate and research postgraduate will remain at the same levels as for 2004.

The Certificate of University Preparation (and any extramural equivalent) will be offered with zero fees.

The Council also decided to introduce an

Extramural Student Services levy of \$25 per student. The levy will be used to introduce a raft of improvements to services for extramurals and replaces existing charges for some services, including counselling.

Massey also continues to be the only New Zealand university to guarantee international students that their fees will not increase for the duration of their study if they complete their degree in the required time.

## Ranking confirms University's stature

Massey is again one of only three New Zealand universities to make the annual Shanghai Jiao Tong rating of the top 500 universities in the world.

The University is ranked between 67 and 89 in the Asia Pacific region and between 404 and 502 in the world.

The Shanghai Jiao Tong ranking measures universities based on their academic research, highly acclaimed researchers and other factors, including the number of articles published and staff or alumni who have won Nobel prizes and Fields medals.

This latest result mirrors the results of the Performance Based Research Fund assessment released early this year. In the PBRF, Massey was ranked third for research income, degree completions and absolute numbers of national and internationally rated researchers, a result Vice-Chancellor Professor Judith Kinnear said was pleasing.

"Overall, we have the third-highest concentration of PBRF quality-rated staff (A, B or C), behind Auckland and Otago. This ranking confirms that we have a critical mass of researchers at Massey University, including those who are known internationally and around New Zealand."

Harvard and Stanford top the worldwide university rankings, with 17 American universities in the world's top 20. Cambridge is ranked third and Oxford eighth. Tokyo and Kyoto universities top the Asia Pacific rankings.

## Diagnostic lab boost for IVABS

A commercial diagnostic laboratory has opened within the Institute of Veterinary Animal and Biomedical Sciences. The siting of a commercial laboratory inside a teaching and research environment is a first for New Zealand and is expected to offer new learning experiences for students and to increase research opportunities in disease control and biosecurity.

New Zealand Veterinary Pathology (NZVP) carries out diagnostic tests on a range of samples taken from production and companion animals. Head of IVABS Professor Grant Guilford says the new partnership will increase the critical mass of pathology expertise on the campus.

"We plan to uplift unusual diagnostic samples from the time-centred commercial environment into the enquiry-centred academic environment and use the combined resources of the University and, in the future, AgResearch, to drill down on the diagnoses."

He says the siting of the diagnostic laboratory within the University is based on overseas models, such as at University of California-Davis and Cornell.

## Marsden fund successes

The University has received more than \$5.1m from the 2004 Marsden Fund, nearly \$2 million more than in 2003.

Eleven Massey projects were successful in securing funding: six full Marsden projects and five Fast Start projects, worth \$70,000 per year for two years.

Assistant Vice-Chancellor (Research) Professor Nigel Long says staff are overjoyed at the result. "This is a splendid outcome. It recognises Massey University's contribution towards knowledge generation in the areas key to New Zealand's development.

"This is the largest grant we have received from the Marsden Fund. We were also pleased to be funded for eleven awards, the second highest number of successful projects, alongside Otago and behind Auckland."



## Volcanic risk assessed

Predicting when Mt Ruapehu or Mt Taranaki might erupt will be the focus of a six-year programme awarded \$4.2 million in total funding from the Foundation for Research, Science and Technology.

The Massey-led research is one of 12 projects focused on limiting the damage from natural hazards to be awarded funding by the Foundation as part of its annual allocation.

Dr Shane Cronin, who will lead the interdisciplinary research team, says the active volcanoes pose a significant economic threat – the 1995-1996 events at Ruapehu cost at least \$130 million. However, we know very little about the size and frequency of eruptions of these two volcanoes.

"Even small eruptions from Taranaki/Egmont pose an economic threat of national significance. An eruption in Taranaki could endanger up to 20 percent of our dairy industry and our entire \$1.25 billion natural gas and condensate industry. In addition, the prevailing westerly winds will ensure that Taranaki/Egmont ash eruptions will impact at considerable distances from the volcano and have the potential to completely paralyse air links within the North Island," says Dr Cronin.



## Investing in science

The arrival of New Zealand's most powerful NMR spectrometer, the commissioning of the Double Helix supercomputer and an investment in an Australian-based synchrotron project have made 2004 a bumper year for University investment in science and technology.

The newly installed Bruker Ultrashield 700MHz NMR spectrometer and its sibling 500MHz and 400MHz machines give Massey an NMR capability unrivalled in New Zealand. The 700MHz spectrometer is the most powerful in the country and, at \$3 million, the biggest single investment in research infrastructure made by any New Zealand university. The spectrometers allow molecular structures to be resolved.

Helix, the University's supercomputer, will also soon be boosted. Two years ago Helix was ranked the most powerful supercomputer in the country and one of the most powerful 500 in the world. Now an even more powerful cluster, christened the Double Helix, has been commissioned.

The Double Helix uses the latest 64-bit technology. Like the Helix before it, the Double Helix will be vital to the research being undertaken by the Allan Wilson Centre for Molecular Ecology and Evolution.

The University has also committed \$450,000 over the next three years as part of New Zealand's \$5 million contribution to the Australasian synchrotron beamlines project.

The synchrotron, which will be based in Victoria, Australia, will create fine beams of extremely bright light that can be used to investigate the structure of molecules and matter. The applications for synchrotron light include biotechnology, medicine, environmental sciences, agriculture, mineral exploration, materials development, engineering and forensics.





## Risk and the tired truck driver

As many as one in six truck crashes may have driver fatigue as a factor, a study by the Sleep/Wake Research Centre has found. This is three-and-a-half times higher than previous estimates, which were based on Land Transport Safety Authority (LTSA) crash reports.

To assess the biological risk factors for fatigue, 380 questionnaires were distributed by Commercial Vehicle Investigation Unit (CVIU) officers to drivers involved in truck crashes in 2001-2002. 146 drivers completed questionnaires. A total of 8.5 percent of crashes occurred between midnight and 8.00am and involved long duty hours, or long driving hours, or both. The questionnaires were linked to the crash reports from the LTSA crash database.

Using a combination of methods, 17.6 percent of crashes were identified as involving driver fatigue. This is 3.5 times higher than the LTSA crash reports for the same study period would indicate.

"In the United States, driver fatigue is recognised as the number one safety issue in the trucking industry," says Professor Philippa Gander, Director of the Sleep/Wake Research Centre.

"You don't have to be nodding off to be at risk," she says. "When you are fatigued your reaction times slow, you don't steer as well, your speed control deteriorates and your cognitive functioning is impaired. This means that your ability to assess a situation and react to it decreases." The 13-month study was funded by the Road Safety Trust.



## Meat industry workers at higher cancer risk

A study of meat industry workers around New Zealand has found a significantly high rate of cancers, particularly lung cancer, which may be caused by exposure to cancer causing agents carried by animals.

The study, undertaken by Dr Dave McLean of the Centre for Public Health Research, found that the rate of lung cancer in the 6000-plus study group was significantly higher than in the general population. While the cause of the higher incidence is unknown, one possibility was exposure to animal-borne biological elements, such as bacteria, viruses or fungi. Evidence of an association with cancers of the lymph system was also found. These included non-Hodgkin's lymphoma and possibly leukaemia.

Ongoing health problems among timber workers exposed to industry chemical PCP are also being investigated at the Centre for Public Health Research and led by Professor Neil Pearce.

The project, funded by the Ministry of Health, aims to ascertain whether timber workers exposed to the PCPs (pentachlorophenols) are dying earlier, getting cancers more often and suffering more chronic health problems, including fatigue, nausea and neuropsychological dysfunction.

Professor Pearce says the study addresses concerns expressed by former timber workers in the past decade about a range of chronic health problems.

Administered by the Health Research Council, the \$520,000 study will compare timber workers' death rates with national rates, and estimate the scale of any risks attributable to PCPs.



## Amphetamines penetrate New Zealand drug market

The illicit trade in amphetamine-type drugs may have effectively doubled the dollar value of New Zealand's total illegal drug trade in less than 10 years, Massey's SHORE researchers have found.

The research, commissioned by the Police, was undertaken by Dr Chris Wilkins and Massey University's Centre for Social and Health Outcomes Research Evaluation in collaboration with the Office of the Police Commissioner.

Dr Wilkins calculates the illicit market for amphetamine, methamphetamine and MDMA/ Ecstasy in New Zealand to be worth about \$168 million a year – or around the same value as the market for cannabis. This implies that authorities are currently seizing about 10 percent of the drugs in circulation.

The research found some evidence that the the proceeds from the sale of ATS drugs are concentrated among the small number of gangs who were instrumental in the introduction of methamphetamine manufacture to New Zealand.

About one in 10 New Zealanders aged 18 to 29 – about 100,000 people nationwide – have used an ATS drug in the past year and about a third of this group are frequent users. The data suggested this group has a more middle class profile than other drug users – many are employed in well paid jobs and have high levels of education.



## Fate of dinosaurs questioned

Was an asteroid responsible for the extinction of the dinosaurs? Writing in the October issue of *Trends in Ecology & Evolution*, Professor David Penny, from The Allan Wilson Centre for Molecular Ecology and Evolution, and Matt Phillips from the University of Oxford, argue that fossil and molecular evidence does not support this view.

According to the popular theory, birds and mammals inherited the Earth following an asteroid impact that wiped out the dinosaurs at the end of the Cretaceous period 65 million years ago. But Professor Penny and Phillips are unconvinced. "We agree completely with the geophysicists that an extraterrestrial impact marks the end of the Cretaceous," says Professor Penny. "But after 25 years they have still not provided a single piece of evidence that this was the primary reason for the decline of the dinosaurs and pterosaurs."

The pair are calling for scientists to take a closer look at the fossil and genetic evidence.

## Gays and lesbians surveyed

Most gay and lesbian people in New Zealand want government recognition of same-sex relationships and most prefer marriage to civil union, a survey by the Lavender Islands research team has found. Led by senior lecturer in social work Dr Mark Henrickson, the survey questioned 2276 gay people, the broadest study so far in New Zealand. Most responses came from Auckland, with researchers finding high levels of both education and income among their respondents.

## Effect of heating emissions studied

A new study will look at the effect of the emissions from gas bottle heaters on New Zealanders' health.

Massey University's Dr Robyn Phipps and Professor Chris Cunningham will play leading roles in an Otago University Medical School-led research project that has just received \$3.65 million in funding from the Health Research Council to look at the health and environmental effects of gas and electric heaters in 800 homes during the next three winters.

The project will look at emissions from heaters, the effect they have on the environment, and tie these to the health of the occupants.

The research is a continuation of the 'Healthy Homes / He Kainga Oranga' programme which has been running for three years looking at the effect of insulation on homes, and how effective insulation improves the health of the indoor environment and of the occupants. "That study found insulation had some effect but heating also played a role. This study will help identify the best form of heating. Work done in the lab looking at emissions from gas heating gives us reason for concern," Dr Phipps said.



## Hall freezes over



The coldest week of the year was the right time for the University to open a cool art exhibition in the Great Hall of the Wellington campus. An ice skating rink formed the centrepiece of *The Ice Rink and The Lilac Ship*, a work by fine arts lecturer Maddie Leach.

This sculptural installation comprised an 18-metre long, fully-functioning ice rink, accompanied by a video projection of a cruise ship drifting out of Wellington harbour on a calm evening.

Ms Leach says *The Ice Rink and The Lilac Ship* is an example of a visual arts research project that investigates ideas of audience spectatorship and performance in relation to the art object.

## News about New Zealand wildlife



Mohua the giant spotted kiwi who broke the tip off her beak while being transported from the Heaphy Track to Nelson's Lake Rotoiti is in good health and mending slowly after more than six months in the Wildlife Ward.

Avian veterinarian Clare Green says Mohua's beak is growing back, although more slowly than they thought it would, but it will be some time before they can judge what the prognosis is.

Kiwis use the nostrils at the tip of their beaks to find the worms and invertebrates on which they feed. Mohua lost one nostril and part of the other when she broke her beak. If the beak fails to heal satisfactorily, Mohua will be unable to feed herself. Mohua's progress has been watched with interest by kiwi specialists around the country. "We didn't know what to expect," says Dr Green. "It has grown 3 to 4mm but it is still too early to know whether the nostril will remain open and what Mohua's prospects are."

Researchers in the University's New Zealand Wildlife Health Centre are in the process of analysing information on three Hector's dolphins caught

near Banks Peninsula and tagged with satellite transmitters.

Marine mammal expert Dr Padraig Duignan says the preliminary data shows the dolphins were in good health and that they were not stressed by the capture and handling.

The most disturbing finding for the health screening was that Puari, the oldest female, appears to have been infected by *Brucella*, a bacterium that can cause abortion in dolphins. This could be why reproductive success is so low in Hector's dolphins and may even explain the rapid decline of the closely related Maui's dolphins in the North Island.

A postmortem and pathology tests carried out by Massey University vets show that the three kakapo that died suddenly in July after having been translocated from Codfish to Chalky Island died of erysipelas, a disease caused by the bacteria *Erysipelothrix rhusiopathiae*.

Dr Brett Gartrell, who led the postmortems, says the bacteria can be tested for and treated with antibiotics, and a vaccine is available.

## Alumni take Food Awards



They've come a long way, these three Massey food technology graduates from 1969, and it's been a highly successful journey. In October they were reunited at the Massey University Food Awards, the country's premier awards for the food industry. Dick Hubbard (at left), only 48 hours into his reign as Mayor of Auckland, collected the Heart Foundation of New Zealand Nutrition Award. Gerry Townsend (centre) was celebrating winning the Massey University-sponsored Premier Award, which went to Heinz Wattie for a single serve instant tomato soup sachet. Townsend is a group product development manager for Heinz Wattie. Torben Sorensen (right) is consultant food technologist to Auckland-based Cotterill and Rouse whose concentrated flavour bases won the New Zealand Food Safety Authority Award.





The Prime Minister first up in the Recreation Centre's new cricket academy with Takapuna Cricket Club representative Neil Murray and Deputy Vice-Chancellor – Auckland Professor John Raine at rear.

## Albany Campus Recreation Centre opens

The Albany campus has a new \$9.4 million Recreation Centre. At 4500 square metres and fitted out with the latest equipment, the centre is the equal of any the country. It houses a sports hall and fitness studio under one roof. The centre is also home to the North Harbour Cricket Centre, an indoor cricket training facility which is a joint venture with the Takapuna District Cricket Club.

Under a partnership agreement between the University and the Albany Students' Association – which has a substantial representation on the centre's management board – a building levy is to be paid by each student. Initially this will go towards the recreation centre building, and longer term towards other projects that benefit students on campus.

The ASB Trusts supported the development with a grant of \$400,000 and a further grant of \$75,000 to the cricket centre. Vodafone also contributed to the Recreation Centre with a grant of \$45,000.



## New Zealand School of Music progresses

The New Zealand School of Music was officially launched at a combined concert on 1 October at Museum of New Zealand Te Papa Tongarewa. The concert came within days of the news that Massey and Victoria had been given the go-ahead to locate the New Zealand School of Music on a central Wellington city site.

After considering 225 submissions on the proposal – 58 percent of which favoured the plan – the Wellington City Council has agreed to allow the two universities to build the New Zealand School of Music on the Jack Hott Green and former Circa Theatre, subject to a series of conditions. An independent quantitative survey carried out for the Council showed 72 percent support for the plan.

Massey Deputy Vice-Chancellor Professor Ken Heskin and Victoria Deputy Vice-Chancellor Professor David Mackay have welcomed the Council's decision.



## Award-winning Design Students

Massey students have scooped three top design awards this year. Industrial design student Garry Sammons won a prestigious international Ducati.com special prize for his Velocità coffee maker. Sammons was one of five students from Massey's industrial design programme to make the finals. The competition invited design projects or artworks that drew their inspiration from Ducati's tradition of high performance motorcycles.

Leon Oliver won the 2004 Dyson Product Design Award with a design for a life-saving, man-overboard boating device. Massey graduates have won the award every year since it was set up in 2001.

Oliver's 'Sentinel' is designed to protect a crew member who has fallen overboard at sea. Using an electronic watch the crew member can remotely deploy a life raft from the vessel. The watch also activates an onboard alarm to alert the crew to the accident.

Rebecca Ward's devore wool and viscose coat won her a trip to Italy as first prize in the Dávines Fashion Designers' competition. The 20-year-old is in the second year of a Bachelor of Design, studying fashion and textiles.



## Music used in autism treatment



The Conservatorium of Music and the Wellington Branch of Autism New Zealand has successfully trialled a school holiday programme of music

experiences for children who have Autistic Spectrum Disorder (ASD).

Health science lecturer Stuart McLaren, father of an autistic child, suggested the initiative: "While many of our children struggle with interpersonal skills and verbal communication, they often have a real connection with music. They might even have a special strength in music, and some have perfect pitch – so why not use such strengths to help them?"

The developmental disorder affects about four in 10,000 children. It is characterised by deficits in communication and social skills, and restricted or rigid interests. Many children with autism have a particular interest in music.

# What becomes

**More than 50 people have been through the Massey programme. Not one has dropped out.**

Ian Britton and the phase 2 rehabilitation programme in action

Healthy years of life lost per 1,000 population		
	Heart Disease	Stroke
Australia	5	3
Canada	5	3
New Zealand	7	4
Britain	7	4
United States	8	4

WHO atlas of global heart disease and strokes, 2004 [www.who.int](http://www.who.int)

To look at them, you would not think they recently had serious heart problems.

It is Wednesday morning, just after 8.00am, and there is frost on the grass outside Massey Wellington's Beats Per Minute fitness studio. But inside, eight people aged from mid 40s to late 70s, are sweating. After twenty minutes on exercise cycles, treadmills and a rowing machine, they are now lifting hand weights. As you watch them puff, strain and perspire, they look healthy enough.

Their medical notes would say otherwise. Most of these people have had heart attacks. Some have had heart valve replacements, many have stents – tiny, trellis-like metal tubes – to keep arteries open.

Take Ian Britton. The 52-year-old Petone businessman is a big, fit man – who carries a small piece of titanium in his chest. In February, while in Australia, a piece of plaque shifted in one of his arteries, blocking it. He had a couple of dizzy spells, then a heart attack.

"It's like an elephant sat on your chest," he says. "You find it hard to breathe."

The operation that followed – an angioplasty – was quick and painless. A tube was put into his stomach and dye squirted into his veins to reveal the blockage. A balloon was inserted to expand the artery, which was unclogged, then in went the stent. Ten minutes and \$15,000 after it began, the operation was over. Being under local anaesthetic, Britton could even watch on video monitor.

Afterwards came the business of setting about recovery.

Exercise is good for the heart: it increases good cholesterol and gets rid of bad, reduces weight and blood pressure, increases the heart's ability to pump blood and gives a sense of well-being. The prescription applies as much to people who have had heart events as it does to the healthy.

But if you have had a heart attack, you become wary. "One of the things you feel when you have a heart attack is that the next time you pick up a concrete block you might drop dead. It takes a while to get over that," Britton says.

Dispelling the fear of exercise is one of the goals of the Massey cardiac rehabilitation programme set up by exercise science lecturer Jacques Rousseau in 2003, in association with the cardiology department at Wakefield Hospital. "People have been told to exercise, but what do they do? Where do they go? How do they know what is the right intensity?" the soft-spoken South African says.

If people are left to their own devices, good intentions will only take them so far. A US study of 83 patients who had either had heart attacks, bypass surgery or angioplasty found that virtually all of the patients' exercise efforts waned after a year – and one in seven failed to exercise at all. That lack of motivation is easier to understand when you learn of estimates that one in four people will suffer from depression after a heart attack.

More than 50 people have been through the Massey programme. Not one has dropped out.

Britton visits the studio three times a week for an hour of individually-tailored and closely-monitored exercise. Exercise science students and a nurse check pulse rates and blood pressure every five minutes – it would not do to overdo things – and, as a 'just in case', there is emergency equipment, including a defibrillator, on hand and a direct line to a hospital.

"The course has changed lives. People who have been scared to do any form of exercise are now exercising regularly, and are back at work," Rousseau says.

Rehabilitation for people who have had heart attacks or cardiac surgery comes in three phases. Phase one takes place at the hospital immediately after the operation. Phase two is monitored exercise rehabilitation – such as the programme Britton is taking part in at Massey – one of two in New Zealand to operate outside a hospital. Phase three is fitness maintenance.

In answer to demand from those who have gone through the phase two programme, Rousseau has also set up a phase three programme, funded by donations and run voluntarily by exercise science students. "It's the best thing," says student Jessica Callahan. "It's a really, really good feeling watching people



# of the broken hearted?

progress. I was on the [phase two] programme that started a year ago and their mental and physical progress since then is amazing.” For students an involvement in the phase two programme forms a practical component of two exercise science papers, as well as valuable work experience for those who want to become personal trainers.

Māori have rates of cardiovascular disease that are two-to-three times that of non-Māori. And Rousseau says his research shows that Maori tend not to go to rehabilitation programmes. “The needs of different cultural groups differ. For rehab programmes to be successful you have to take that into consideration.”

Last year he helped set up an eight-week course at the iwi-based Ora Toa Health Unit in Porirua. Blending a mainstream exercise programme with activities drawn from Māori culture, the programme incorporated exercises based around kapa haka and the movements used when wielding rakau sticks and the taiaha.

Rousseau believes monitored exercise programmes are crucial to easing heart attack victims back into a healthy, active lifestyle, and he is a strong advocate for them being government funded. Without successful, adequately-funded rehabilitation programmes, he argues, the economy must bear the far more substantial costs of lost earnings as well medicine and care.

Back at the studio, under the joking and small talk, there is a seriousness. These are people who have been given a warning, a reprieve and a way forward. What happens now is up to them.



Exercise science lecturer and programme founder, Jacques Rousseau.

## Heart disease and how to live with it

One of the instigators of Jacques Rousseau’s exercise programme was Victor Marks, co-author of *Heart disease and how to live with it*.

Marks remembers his own heart attack well. While holidaying with friends in Ireland he began “out of the blue” to experience back pain and nausea.

When the pain began to worsen, he called the doctor. “He had a look at me – I had gone totally pale – and said we’d better get you to hospital, I think it’s your heart. While we waited for the ambulance the pain became worse, switching from the back to the chest.”

Then things became surreal. “Ireland is Catholic,” explains Marks. “So I am lying there on this gurney having this heart attack, pumped full of morphine and in phenomenal pain, and there are these pictures of Jesus bleeding on the cross everywhere. I remember this nurse: her main preoccupation was whether she should call the priest for the last rites. The doctor said yes, I think you should. I passed out then.”

When he came to – some 16 hours later – he was sent for angiograms. “I was blocked to pieces.” Marks underwent a multiple bypass complete with complications and a second operation during which he technically “died”, his heart needing to be massaged back into action. “I joined the flatline club,” he says.

Afterward came a long period of rehabilitation and eventually the resolution to help those, like him, who are dealing with heart disease and its aftermath.

Marks encouraged Rousseau in his endeavours to set up a rehabilitation programme at Massey, and he co-authored *Heart disease and how to live with it*, the first of a series of Lifecare books published by the Institute of Food, Nutrition and Human Health.

Emerging from a heart attack or similar event is life changing, says Marks.

“At that point you are in shock. You are suddenly confronted with your own mortality. What you need then, more than anything else is assurance. You need assurance that you can walk or trot down the street and not burst open.”

Later, on the other hand, a certain complacency can settle in: “You feel well – you can run down the street, you can leap in the air – so you go back to your old habits.”

*Heart disease and how to live with it* and the Massey rehabilitation programme are complementary: both provide information, reassurance, and the impetus to develop a healthy lifestyle.

Does Marks follow his own advice? Well, he has had odd lapses of inactivity, but these days he spends three hours a week at the gym. “Apart from being good for the heart, physical fitness makes you feel better.”



*Heart disease and how to live with it* and the others in the Lifecare series of books are being sold through pharmacies. For a review of *Food Matters* turn to page 28.

# 100% Pure New Zealand



**Trish and Doug Waugh were part of a team that won one of five gold medals at the 2004 Chelsea Flower Show. Their garden was the first entry from a New Zealand team in 142 years of the prestigious event. The couple met while students at Massey University in the '70s, and combine creative forces as the Landscape Design Company, based in the Bay of Islands for the past 20 years.**

The Waughs are home at last, enjoying the spring sun alongside a shrub clipped to the profile of an Easter Island statue. Beyond lie the steep Kaimai Ranges.

This New Zealand garden is much lower maintenance than their last. Here there is no need to rise early to snip away any imperfections or wipe individual leaves clean of dust and dew. Here there are no hands to shake, no photos to take for fans who can't get close enough. The place is gloriously unpeopled.

At the Chelsea Flower Show there was no escape. Their garden there, the '100% Pure New Zealand Ora – Garden of Well-being', was visited by 157,000 people and millions more toured the garden vicariously via the BBC documentary devoted to how it was made.

Ex-pats in particular would be enthralled, recalls Trish. Often you would see them pause to take a deep breath and shut their eyes, while the soundtrack of birdsong and Māori kōauau and pūtōrino flutes

drifted overhead and thermal water gushed down the length of the carved mokowaiwera (water-lizard) to the steaming hot pools.

"The music and the birdsong really touched people and there was quite a high level of emotion, especially from the New Zealanders living in London. We worked really hard to create that feel, and to do things appropriately."

The use of a soundtrack was a first for Chelsea and almost against the rules, says Trish.

"If anyone had complained about the music we would have had to dismantle the sound system, but luckily our closest neighbour was bronze sculptor Jeff Whitten, an absolute veteran of the show. He was having a great time and would drop in regularly to talk and wave his arms about."

The Kiwis established a reputation for the quality of their hospitality. On the days reserved for invited parties and VIPs, celebrity chef Peter Gordon fired up the barbeque, dishing up salmon, scallops and



pikopiko fronds. Baroness Thatcher, the Duke of Kent, David Bellamy and Ringo Starr came to lunch and Trish Waugh chatted to Germaine Greer.

"She loves her plants, and is revegetating her property in Australia, trying to get it back to its natural state. She was very interested in the diversity and structure of our garden, and also in the spiritual elements to it."

Tourism New Zealand, principal sponsors to the show, leveraged the attraction by sending four-wheel drives out into the London traffic, each splattered in mud and accessorised with kayak and mountain bike.

Trish and Doug Waugh assembled the Chelsea team four years ago at the suggestion of organisers of the Ellerslie Flower Show. They were joined by film set designer Kim Jarrett (also a Massey alumnus) and artist Tina Hart, whose murals of Mt Tongariro enhanced the garden's tones and depth of appearance. Weta workshop designer Brian Massey was responsible for the low rumblings of the silica thermal pools, modelled on the Pink and White Terraces, and Lionel Grant carved the mokowaiwera from driftwood.

Designed to represent a slice of the central North Island's geothermal landscape, the 10 by 11 metre garden squeezed in more than 1,300 plants from 80 indigenous varieties selected for their culinary appeal, cultural significance and traditional Māori medicinal properties. Every plant on display had to be flowering, which presented a huge horticultural challenge.

"We started to source plants early in 2003, and really had to ferret around. We found several specialist exotic nurseries and a tiny backyard nursery in London that was full of small and squashed natives. Some of the plants looked like they had been there for a very long time."

New Zealand's hardy and tropical-looking natives are popular among knowledgeable English gardeners, especially the tree ferns and hebes. Trish ended up buying 75 percent of the plants locally.

"The plants sourced in the UK were a bit of an unknown as to when they would flower. The kowhai

we found flowered in November instead of May, and the one we found with flowers was in a sad state by the time it got to the site."

The powder-blue Chatham Island forget-me-nots and scented mānuka blossoms were in fine floral form, however, and Trish found a creative ally in ferns and grasses.

"The ferns spore rather than flower, and the hen-and-chicken fern is particularly pretty in spore. We also chose plants with lasting seed-heads, like native tussock and the herbaceous gunera with red berries like bunches of upside-down grapes."

Bright astelias and the iconic silver fern gleamed in the green, and the tussock grasses and cabbage trees provided structural interest. A four-metre cabbage tree came from a private collector, and young ferns were grown to maturity in a nursery in Cornwall, which has a similar climate to the central North Island. Trish's prize specimens – a rimu tree, mature tree ferns, the endangered shore spurge and polished bronze paritaniwha – were transported by air and sea from New Zealand.

So it was that in May 2004 – four years from the first talk of a team – people, plants and props assembled on the 11-acre Chelsea showgrounds for a three-week, muddy flurry of landscaping and planting.

"The first week was the hardest for the guys. It rained and rained and everything turned to mud. Then we had scorching heat, which baked the ground and we had to use pick-axes to break through the surface." Then the thermal pools refused to heat and the sound system played up, but come opening day all was well."

The Waughs have amassed a stack of gold

medals since they launched The Landscape Design Company in 1982. Trish graduated with a Bachelor in Horticulture in 1979 and has seen the landscaping industry grow from an unknown activity to prime-time TV entertainment.

"I think I timed things well. The landscape design department at Massey was really strong, with two American designers, Tom Stille and Lesley Maughan. They had different approaches and were very influential.

"We learnt from the ground up, the importance of rock and plant placement and of working with the land's natural contours. We took class trips to Mt Taranaki, Wellington and Auckland to study gardens and meet landscape architects."

Fresh from the course, Trish worked for the Wanganui City Council as their first landscape designer. She bought her own equipment, was her own boss and had to explain her job to just about everyone who asked.

"The first gardening shows on television – Maggie Barry's show in particular – were a major turning point, illustrating the benefit and values of garden design and construction."

These days people know what to expect from a landscape designer and Trish enjoys working one-on-one with her clients, producing pastel-and-pen

plans for gardens and grounds. Business is good and many of her first gardens are maturing beautifully into their second decade.

The Chelsea garden will not be so long lived, but it will have a second incarnation as a feature in this year's Ellerslie Flower Show, which will be held in Auckland from the 23rd to the 28th of November.



To see more of the garden and to hear the soundtrack, visit [www.newzealand.com](http://www.newzealand.com).

The gold medal-winning team holding certificates presented by Prime Minister Helen Clark. Left to right: Vicki Grant, Doug Waugh, Trish Waugh, Helen Clark, Lionel Grant, Brian Massey. Photos courtesy of Tourism New Zealand





*How does a globe-trotting traveller get enough sleep?*

Dr Leigh Signal is uniquely placed to answer this question. Holder of a commercial pilot's licence, she is also a Senior Research Fellow at Massey University's Sleep/Wake Research Centre in Wellington.

Dr Signal studied at Massey's School of Aviation in Palmerston North. After completing her bachelor's degree in aviation, she stayed on at Massey and worked as an Assistant Lecturer. When Professor Philippa Gander set up the Sleep/Wake Research Centre in 1998 and invited Dr Signal on board, she jumped at the chance.

"Professor Gander worked on huge field studies on fatigue countermeasures for NASA during the 1980s and 90s. They studied hundreds of pilots in different types of operations and their sleep/wake patterns. Her work has been seminal in sleep research.

"We get fantastic support at the Sleep/Wake Centre for working with industry," says Dr Signal. "We have good research tools and a neat mix of researchers from a range of backgrounds.

"My job brings together two things I love: aviation and research," she says. "It combines my practical background in flying with my interest in aviation-related research."

*What is jet lag?*

Humans, like most animals, have evolved to match their physiological rhythms to roughly those of a 24-hour day. Every day your body temperature, blood pressure, your levels of stress hormones, even your digestion, follow certain regular 24-hour patterns. For example, 4.30 in the morning is when your body temperature is likely to be at its lowest. At 10.00 in the morning you will be thinking at your fastest. At around 5.00 in the afternoon you will be at your peak in terms of cardiovascular efficiency and muscle strength. This synchronisation to the daily cycle is called the circadian clock, from the Latin for about, *circa*, and day, *diem*.

The body's core rhythms – such as body temperature and blood pressure – are largely maintained by two bundles of nerve cells in the brain called the suprachiasmatic nucleus (SCN), but there are also peripheral clocks in various tissues and organs. When you shift time zones, all of these systems are thrown out of whack and the normal night/day cycle.



# Please reset your watches

## A traveller's guide to jet lag

Compare it to an orchestra: at one moment everyone is following the conductor and harmony prevails; at the next there is no conductor and everyone is playing from a different part of the score. We've gone from music to noise.

If we stay in the new time zone, these clocks will all reset themselves eventually. The SCN is reset by cells in the retina of the eye that transmit information about light levels. However, depending on how many time zones you have crossed, the process can take days or even weeks. Until then, you are likely to experience the effects of jet lag.

### *Beating jet lag*

Dr Signal says there is no one-size-fits-all advice for avoiding jet lag.

"Everybody experiences the effects of flight differently. There is too much individual variability to prescribe a single approach. But for someone about to take a long flight from New Zealand, I'd recommend not being sleep deprived before you take off. There's often a lot of running around to be done before a trip, but you don't want to be exhausted before you step on the plane.

"If you need to be fully functioning on arrival, get as much sleep as you can during the flight. People who travel regularly get to know what works for them."

### *Fooling the body clock*

In the laboratory it is possible to adjust people's circadian clocks by exposing them to bright light, the effect depending on when they are exposed to the light, how bright it is, and how long the exposure. But outside the lab this is more difficult to achieve. There are often many other competing cues, such as when you choose to sleep, eat and socialise.

On the other hand there are ways you can make life more miserable for yourself. One of them is to stay up late packing before you leave. Do this, and you are likely to sleep well that night and badly the next, beginning a zig-zag pattern of one good night followed by one bad one.

If you are trying to adapt to your new time zone, you can time your activities to help reset your clock. If you have flown from Auckland to Hong Kong you should try to be outside in the late afternoon; if you have headed to Los Angeles try to be outside in the early morning (this is to allow light exposure to help

shift your circadian clock in the right direction). Incidentally, it is easier to adapt to a longer biological day, so the person who has flown west to Singapore is probably going to have a better time of it than the person who has flown east to LA.

### *What about drugs?*

If you mean alcohol and caffeine, then you need to be sensible. Alcohol will certainly help you sleep; it is probably the most widely used sleeping aid we have. The problem is with the quality of sleep it delivers. Alcohol suppresses REM sleep – a cycle of sleep during which the brain is quite active and the eyes move rapidly, hence the name Rapid Eye Movement sleep. If you go to sleep after a few drinks then your REM sleep will be suppressed until your body has processed the alcohol, and then the REM sleep will rebound and your sleep will be restless and disturbed. Remember that your body processes alcohol quite quickly, at about one standard drink an hour – that's a nip of spirits, a glass of wine or half a pint of beer – and you should plan to go to sleep sober.

Caffeine is a stimulant, so is going to disturb your sleep. For most people the stimulant effects wear off after three to five hours, but if you are sensitive to caffeine the effect can last up to 14 hours.

The jury is out on whether sleeping pills are a good thing for long flights. You certainly wouldn't want to wake up groggy during any sort of an emergency. If you do take sleeping pills during your flight, you should probably take them at around the time night would fall in your destination.

When you get to your destination, then taking sleeping pills for the first couple of nights is not unreasonable if you need to function on local time soon after your arrival. Taking the pills probably won't reset your circadian clock, but it ought to mean you are less sleep deprived. You should speak to your doctor first, and try the same sleeping pill at home before you travel to make sure there are no unwanted side effects.

### *What about melatonin?*

Melatonin supplements are touted as a natural remedy for sleep disorders and jet lag. It is a hormone produced in the pineal gland, a pea-sized structure at the centre of our brains. One of the pathways from the SCN (the body's master clock) runs to the pineal gland. Melatonin can also exert an influence on the

SCN and it may have a role in influencing sleep. But none of this means you should take it as a drug.

One problem is that melatonin has different effects depending where in your clock cycle you take it. Another more compelling issue is that we don't know enough about the safety of taking melatonin either in the short or long term.

### *What about the pilots?*

If jet lag can have such an effect on the occasional traveller, how do airlines manage the sleeping and waking regimes of their pilots?

International airlines and regulatory bodies wish to set and abide by best practice to make sure that pilots are well rested and alert. Along with her colleague Margo van den Berg, Dr Signal is conducting a study on behalf of the Civil Aviation Authority of Singapore. Singapore Airlines flies new long-range A340-500 jets direct from Singapore to LA, an 18-hour flight. This requires two flight crews working in shifts. Dr Signal's job is to collect data on the pilots' sleep during the flight and to assess their alertness and performance. To measure their sleep she wires them up to sensors which record brain activity, eye movement and muscle tone.

"The flights seem to go quickly because I am busy," says Dr Signal. "But I am shattered when I get to LA – there's no time for sightseeing." Two days later she repeats the data collection on the return flight.

When the study is complete next year, we will have a better picture of how flight crews cope with long-haul flights.

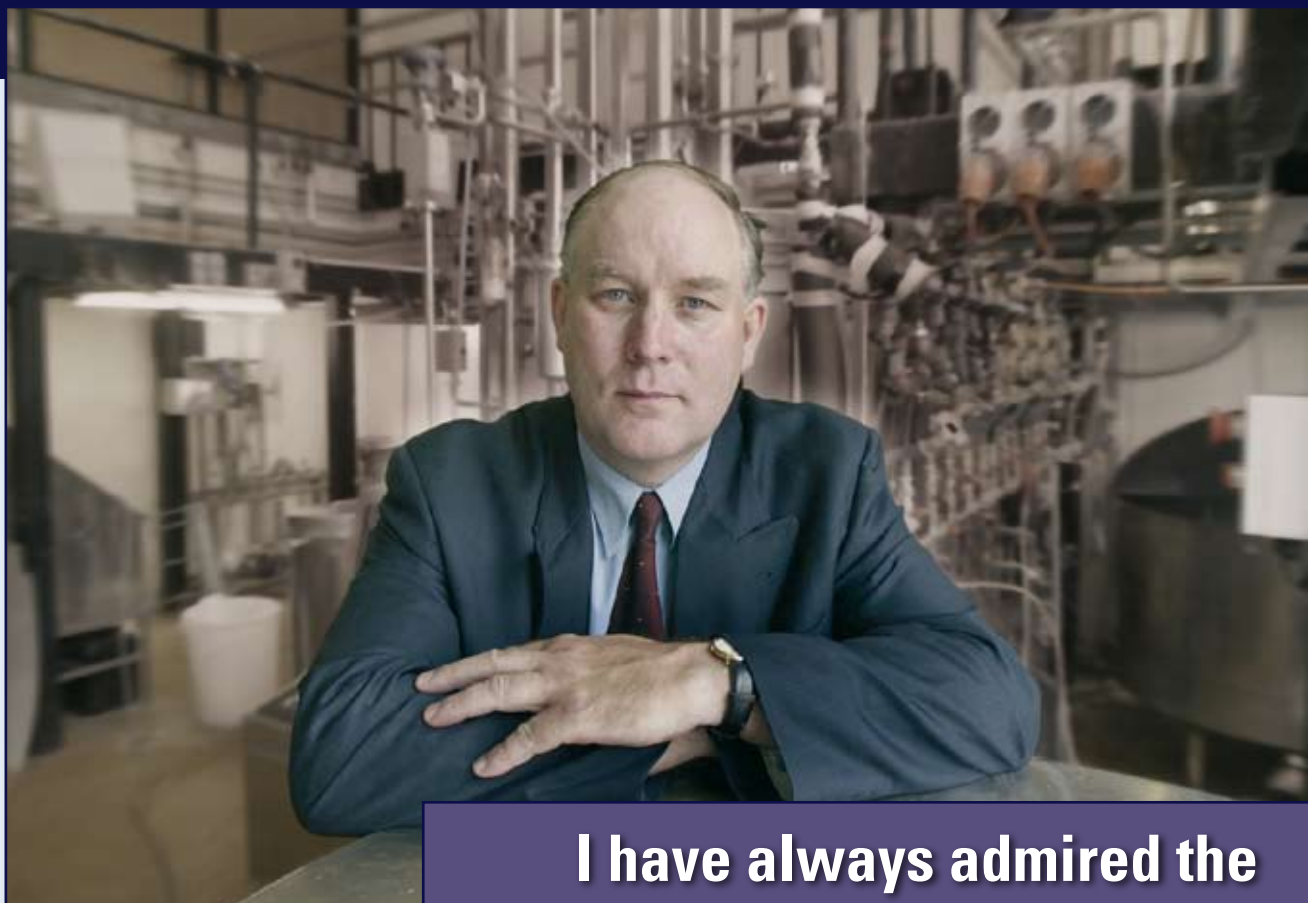
### *Commuting by air*

For Dr Signal, aviation runs in the family. Her husband, Mathew, is a pilot with Air New Zealand Link, so sometimes he gets to drop her off at work. "We live in Gisborne, so this means getting up at 5:15 on a Monday to catch the 6:50 flight to Wellington."

"It's not uncommon for people in the aviation industry to commute by air," she says. "We're moving to Blenheim soon, so my half-hour commute will be similar to someone who travels into Wellington from the Hutt Valley each day."

And how much sleep does a sleep researcher need? "I function best on eight and a half to nine hours' sleep a night – so I'm looking forward to a later start when we move to Blenheim."

# Delicious and good for you



**I have always admired the University for its research ethos and that real hands-on approach which ensures relevance.**

In a Wellington supermarket I am scouting for elements of the functional food revolution I have been told is building. To be honest, I haven't found much. Sure, there are breakfast cereals enriched with vitamins and minerals, but these hardly count.

It's not until the dairy section that I find what I want: yoghurts laced with 'probiotic' cultures of bacteria that promote healthy digestion, alongside statin-containing spreads that cut cholesterol. Then as I carry my purchase to the counter – as if to clinch the argument that functional foods have arrived – packets of chewing gum promising to whiten my teeth. Didn't chewing gum used to be bad for you? None of these products were on the shelves a decade ago.

Functional foods, according to one definition, are foods designed to provide a specific and beneficial physiological effect on health, performance and/or well-being extending beyond the provision of simple nutrients.

Iodised salt, with the protection it offers against goitres and cretinism, is an archetypal functional food. But adding iodine to salt, or vitamins and minerals to a breakfast cereal, is hardly to be compared with the precision and sophistication with which foods are now being engineered to confer benefits.

Many of our afflictions have some dietary component. Think of obesity, hypertension, coronary heart disease and osteoporosis. By choosing a conventional

diet carefully you can influence your health, but this falls well short of being able to choose foods designed to be good for you, their efficacy scientifically proven.

If, instead of turning to modern medicine, you could improve your health by adding functional foods to your shopping list, wouldn't you do so?

And if the market for functional foods does take off, wouldn't New Zealand, a nation that derives more than 50 percent of its income from food exports, want to be a major player?

In his office on the Palmerston North campus, Professor Paul Moughan, co-director of the Riddet Centre, is upbeat about what lies in prospect for New Zealand. He has spent 20 years in food and nutrition research. He has seen functional foods begin to penetrate the marketplaces in Finland, Sweden, Japan and America. And whereas many scientists lament the lack of private sector funding in New Zealand, Professor Moughan is having little difficulty in attracting backers.

"I find the major primary industries in New Zealand are highly motivated to do research that will add value. We've got a large project with Fonterra, we've got a large project with Meat and Wool New Zealand, and both are about discovery-based research to come up with new and innovative products. That's exactly what the Government wants to happen in the economy.



## Professor Paul Moughan is an apostle for the coming functional food revolution.

“These industries are investing in R and D, they do want to innovate and they are innovative industries,” he asserts, as if parrying an attack.

Good things lie ahead: “We have great raw materials, the clean, green ‘brand New Zealand’, and excellent science.” Much of that excellent science will come from the centre he heads.

The Riddet Centre was set up in February 2003 with Professor Moughan and Professor Harjinder Singh as co-directors. Professor Singh, an acknowledged world leader in the science of food structure and functionality, has an office close by Professor Moughan’s. Carrying the tagline “advancing knowledge in food and biologicals”, the Centre brings together expertise from Auckland, Otago and Massey Universities – as well as overseas institutes. Its twin objectives are scientific excellence and industrial relevance.

If things go the way they should, the PhDs, post-docs and Riddet Centre Visiting Fellows will seed the New Zealand food industry with fresh expertise, and the science performed under the aegis of the Centre will both address fundamental questions and find practical – and lucrative – applications.

How well do we understand the links between nutrition, digestion and health? As the recent debates surrounding weight-loss diets have shown, not as well as perhaps most people assumed.

Much of our food wisdom, says Professor Moughan, has been less science than it has been anecdotal. Our commonly accepted truths have often been derived from applied rather than fundamental research. “We need to better understand the underlying mechanisms,” he says.

“I think over the next decade you are going to see a lot more fundamental science applied to the unravelling of the mysteries of and contradictions in human nutrition.”

Professor Moughan first began to confront just how complex the mysteries were when he chose his PhD topic back in the early 1980s: the digestion of protein and the post-absorptive metabolism of amino acids, using the rat and pig as general mammalian models.

On the face of it, you might think that finding out what goes on with the digestion of proteins is easy. Measure the amount of protein that is eaten, subtract the amount of protein that is voided, and there you have it: the protein that has been digested.

But, as Professor Moughan points out, a lot of the protein that is being digested comes not from food but from the animal itself. “In any one day very large quantities of gut protein are completely broken down and completely resynthesised. It is an energy-demanding process.”

Professor Moughan’s work helped distinguish between the ‘exogenous’ digestive processes driven by the digestion of food and the ‘endogenous processes’ driven by the recycling of protein. “We were the first group in the world to show that peptides from protein have a major regulatory effect on gut protein turnover,” says Professor Moughan.

He also took an early interest in the bioavailability of lysine, one of the handful or so amino acids that humans cannot fabricate and so must come from the diet. Lysine is particularly important as a first-limiting amino acid: the amino acid present in the least amount in food relative to its requirement. This key

amino acid also happens to be very susceptible to chemical damage during food processing and storage.

“We came up with what is credited as being an original way of describing lysine left in food that hasn’t been damaged and is available to be metabolised,” says Professor Moughan.

Most research until then had concentrated on describing the chemistry of the changes that take place when lysine is heated. Professor Moughan stood this on its head by looking at the chemistry of lysine molecules that remain unchanged.

He developed a new biological assay – now internationally known as the Massey assay – to measure the availability of lysine in foods. “We’ve had a lot of food companies come to us from all round the world and ask us to put material through that assay and tell them in terms of the chemistry what happens when they do different things to foods.”

Professor Moughan’s invention, with Mr Shane Rutherford, of a bioassay for determining amino acid bioavailability in food has been patented and trademarked (Biolysine™) and has returned a not inconsiderable fee income over the last five years.

His work on protein metabolism and on lysine, which has involved some highly original experimental approaches, has resulted in well over 200 scientific papers. This, he says, is the work on which his Doctorate of Science was based, as well as the work for which he is best known in the scientific community. It is this work to which he attributes the conferral of a personal chair at a young age, a Fellowship of the Royal Society of New Zealand, and more invitations to speak internationally than he could ever hope to accept.

Professor Moughan’s work on the digestion of protein continues. “Lately we have been undertaking detailed studies with human subjects. We have shown that there is a dose-dependent effect of proteins on gut protein turnover and we are now trying to look at underlying molecular mechanisms. If we can understand and manipulate what is going on, then there could be all sorts of ramifications for gut function and health.” The University of Paris is a research partner.

Professor Moughan’s academic productivity becomes more remarkable when you consider that in parallel with his research career he has built and run a series of highly successful university research and teaching units.

His first was the newly established Monogastric Research Centre, of which he became Director in 1991. The Centre worked on the biology of simple-stomached animals, such as humans, production animals such as poultry and pigs, and companion animals such as dogs and cats, and even fish. During Professor Moughan’s five-year stewardship the Centre grew from four to 50 staff.

From 1995 to 1998 he held the position of foundation scientific director of the Milk and Health Research Centre, which Professor Moughan describes as having concentrated on functional foods for humans, and, from 1997 to 2003, the foundation headship of the Institute of Food, Nutrition and Human Health.

After years of steady growth, the Institute now has around 165 staff and 160 postgraduate students. It is, Professor Moughan says, the most outstanding institute for food-related research in the southern hemisphere. “I think you can say that without fear of contradiction.”

# As for what lies on the research horizon, Professor Moughan predicts that nutrigenomics – the study of our nutrients' impact on genes to cause specific conditions – is going to be huge over the next 10 to 20 years.

In contrast, the Riddet Centre is a minnow. Here there are just 20 staff. But it is a prosperous minnow: in the first 18 months of its existence the Centre has attracted more than \$10 million in research funding. It is also of the highest quality. In terms of the New Zealand Government's PBRF exercise, the Centre ranks right up there among the best academic units in the country.

With less administration, Professor Moughan says he is enjoying the luxury of more time to research, think and write.

A large part of the Riddet Centre's private sector research funding – around \$5.8 million – is coming from Fonterra and BASF for the development of what are being termed POSIFoods or "point-of-sale individualised foods". Fonterra is the fourth-largest dairy company in the world by revenue, and second in the volume of milk processed annually; BASF is, among other things, one of the most important producers of vitamins worldwide.

POSIFoods will be fast, nutritious snacks tailored to individuals' dietary needs and taste preferences, delivered at the touch of a button.

"The idea will be that you'll say you want a low Glycaemic Index, high antioxidant, such-and-such a food and you want this colour, flavour and serving, and you'll push a button and out it will come. It will taste delicious and it will be fantastic for you – and all proven by science done by Massey University in partnership with Fonterra and BASF scientists," says Professor Moughan.

POSIFoods will solve one of food manufacturing's eternal problems: storage. "I don't know if you have ever bought one of these sports bars or a low GI, high-fibre type bar. The problem is they often taste horrible. Given what they are made of, they go stale very quickly. They sit on the shelf and they go hard, have that cardboady feel to them. If you could make them fresh and have them warm, just out of the oven, it would be a completely different story. It's like hot bread or a hot muffin. Manufacturing and dispensing the food fresh gets around the technical problems with storage."

Professor Moughan already had an established relationship with Fonterra, and close connections with the conglomerate BASF, which helped him attract their interest in becoming a research partner. The POSIFood team includes Professor Moughan's colleagues at Otago and Auckland Universities as well as Fonterra and BASF scientists.

"We hope that within a year we are going to have a prototype device – a proof of concept – that will deliver the food at the point of sale," says Professor Moughan. "We are talking about something big."

The second largest of the Centre's research contracts is with Meat and Wool New Zealand for the extraction of specialised ingredients from meat for the development of functional foods.

While the dairy industry increasingly breaks milk into its molecular constituents to sell at a premium, the meat industry has changed less in the last 50 years: its trade is largely in cuts of meat and processed meat products. Yet the proteins in meat represent a bonanza of functional food ingredients and bioactive compounds.

Not all of the protein you eat is metabolised by your body, explains Professor Moughan, and if your health is at all compromised – if you are perhaps elderly, recovering from illness or injury, or malnourished – then the quality of protein you get becomes important.

The Riddet Centre intends to extract many different kinds of protein from animal tissue and to break these down to form new food proteins. "Specialised protein ingredients with very high amino acid availability," says Professor Moughan.

"We then might come up with a food for the elderly, for example, who are losing muscle mass, and come up with a balance of amino acids that will specifically meet the requirements for people in that physiological state."

The Riddet Centre team will then spend some time in France working with colleagues at the University of Paris and INAP-G, where these foods and protein mixes will be fed to human volunteers to prove their efficacy.

Professor Moughan also believes that when the proteins are broken down to produce the linked amino acids called peptides "a cornucopia of bioactives" will be found.

"We've been talking to a company in Australia that specialises in assays to prospect or scan for bioactive molecules and it looks like we will be forming a relationship with them. And once a bioactive has been identified we will work with them to take it to commercialisation."

Another of the Riddet Centre's research projects, "Mining Australian biodiversity – a genomics/proteomics approach to milk-derived bioactives", may, in a quirky twist, see platypus milk shipped across the Tasman.

Placental mammals, such as people, give birth to well-developed young. By contrast, the newborn of marsupials and monotremes (think kangaroos, wallabies and possums in one case; platypus and echidna in the other) are tiny and rudimentary. A newborn wallaby is around the size of a jellybean.

In a way you can think of a newly born wallaby as an external foetus. Instead of happening in the womb, most of the joey's development will take place in the mother's pouch or 'marsupium' as it suckles at the teat.

This means that whatever development signals travel down the umbilical cord in mammals must be passed through the mother's milk in marsupials, and herein lies a huge opportunity for bioprospecting.

If the molecules that govern development in the marsupial milk can be identified, then it ought to be possible to identify those same molecules in cow's milk and the genes that are responsible for them. Funded by the Geoffrey Gardiner Dairy Foundation of Australia, the research will be led by Riddet Centre Principal Professor David Mellor and Professor Paul Moughan and conducted in collaboration with the University of Melbourne. "It's an excellent group there, led by a top-rate biologist, Kevin Nicholas, a genomics, proteomics expert," says Professor Moughan.

First, the team plan to identify the stages in development of the digestive tract in the tammar wallaby very precisely. They will then calibrate this against milk samples taken at different stages of lactation. If a stage is particularly interesting, the milk samples will be analysed. "We'll do a complete chemical characterisation of that milk, particularly looking for bioactives that influence development," says Professor Moughan.

If a bioactive protein or peptide is found, then the gene that produces it will be identified. "And then we will go looking for the gene in the cow, and hopefully find a gene that expresses the same or a similar protein or peptide."

"Now you might say, 'Why not go looking in the cow straight away?' But that



Courtesy Rod Emmerson and The New Zealand Herald



would be to look for a needle in haystack. Those proteins and peptides will be there, but they will be there in very small quantities.”

As it proceeds, the project will involve a variety of strange milk samples crossing the Tasman. Not just tamar wallaby milk, but also platypus and echidna milk, and even (deviating back to a placental mammal) seal milk – which it is thought may have interesting antimicrobial qualities.



The prospect of a new generation of functional foods with only-to-be-guessed-at qualities beckons. Milk must be full of useful bioactive compounds, if only they could be identified.

As for what lies on the research horizon, Professor Moughan predicts that nutrigenomics – the study of our nutrients’ impact on genes to cause specific conditions – is going to be huge over the next 10 to 20 years.

“No two people are the same, and it’s not just that they have different genetic propensities for disease development, but also that the foods we eat will turn genes on and off in different ways in different people. So there’s the interaction between the genome, which is unique, and the environment, which includes nutrition, and that nutrigenomic interaction. We know very little about it.”

Professor Moughan’s time is in demand: he holds two company directorships, including the prestigious Geoffrey Gardiner Foundation in Melbourne, Australia, sits on four editorial boards for international scientific journals and is an expert advisor to the FAO/WHO/UNU on dietary amino acid recommendations and protein quality for humans.

His has been a conspicuously successful career, one that has been noticed. “Yes,” says Professor Moughan, “in the last couple of years I’ve been sought to lead a Canadian University and I was recently head-hunted for a prestigious Australian Federation Fellowship. But I like Massey. I have always admired the University for its research ethos and that real hands-on approach which ensures relevance. And while it may sound a bit earnest to say so, ultimately, I’m a New Zealander: I want to serve my own country.”



Nick Roskrige and newly harvested taewa.

## A tale of taewa

Compared to the potatoes you are most familiar with, Māori potatoes – or taewa – are often small, oddly shaped and colourful. But don’t dismiss them for that. Although taewa are unlikely to ever turn up as McDonald’s fries, their history and cultural significance make them a marketable commodity.

“I was really struck the last time I flew into New Zealand. We were handed out a snack – extruded cassava from the islands – and on the back was a little story about the origins of cassava and its indigenous significance,” says Professor Moughan. “So why not a product that has that New Zealand indigenous aspect to it?”

Realising the economic potential of taewa is the aim of a research project that has received \$700,000 in funding from the Foundation for Research, Science and Technology.

The initial study will evaluate the physico-chemical properties of the various varieties of taewa. Longer term, the aim is to develop high-value food products.

Taewa vary widely in their colour, texture, taste and flavour: differences that arise from underlying chemical and physical properties, such as starch and protein content. Before taewa can become an export product, these properties need to be understood.

The Riddet Centre will be working alongside the Tahuri Whenua – the Māori Vegetable Growers Collective.

Nick Roskrige, from the Institute of Natural Resources, and Dr Owen McCarthy, from the Institute of Food, Nutrition and Human Health, will lead the project, along with PhD student Zirsha Wharemate.



# Making his marque

**"It certainly has a presence when you see it full-scale. You think, 'Oh my God!'  
It's exciting. The indicators are that it should be all go."**



It's sleek, smooth and sizzles across the tarmac at a top speed of more than 300 kilometres per hour. It has the open wheels and low, aerodynamic body of a Formula One racing machine and the come-hither curves of a top-class sports car. And it's designed and produced in New Zealand.

It's the stuff of dreams.

Certainly the stuff of Tony Parker's dreams. Massey's head of Three-Dimensional Design has wanted to design cars since he was a child. Now he is designing the Hulme F1 Champion, a high-performance sports car being developed for production in New Zealand.

Underneath a carbon-fibre chassis will be a six-speed sequential transaxle and a modified BMW M5 engine producing 300 kilowatts of power. That engine is unique – the maker of the Hulme, Supercars Limited, is the only company in the world to get the model.

Other major international companies are also contributing to the Hulme, ensuring that everything about it will be top-quality. The tires will be Pirelli, the ABS system Bosch, the airbags Siemens.

However, this is most certainly a New Zealand-made car. It has been conceived here and here is where it will be built, crash-tested and produced.

The first Hulme chassis and two bodies are complete. Associate Professor Parker is now working on the design of the two-seat interior, as well as checking that the car being made matches the design.

"I'm learning an awful lot about that process! It's really very revealing, and fascinating and fun," he says.

A full-scale model of the car will be finished in September and a prototype will be running by the end of the year.

The company is also developing other variants of the Hulme: the Xtreme, an open, F1-type two-seater, and the Super GT for racing.

Next year Supercars Limited plans to produce a number of cars for crash testing, with production to start in 2006. From then they want to produce 75 to 100 cars a year. A minimum of 350 to 500 will be built.

A price has not yet been set, but it is expected to cost somewhere between \$250,000 and \$1,000,000.

The idea for a Kiwi-made supercar first came to Auckland entrepreneur Jock Freemantle, who approached Parker in 2002 to co-ordinate the design team. The two then developed the Two-Second Test for ideas of how the car would look.

The test was to put a drawing of the proposed car among a lot of pictures of various other sports cars, like Ferraris, Lamborghinis and Porsches. A car enthusiast uninformed with the project then looked at the pictures for two seconds. If the proposed car did not stand out, it did not pass the test.

The first 15 designs failed.

Parker then started thinking about a sports car designed to resemble a Formula One racer. Formula One, of course, has a huge international following.

"Lots of people dream of being Formula One drivers and want to drive Formula One cars," he says. "So really that was the jumping-off point, the point of inspiration for this car."

Freemantle says that Parker has more knowledge of Formula One than anyone he has ever met.

After Parker had spent a day thinking about the idea, at 6:30am the next morning he received an excited call from Freemantle. The entrepreneur had had the same idea - an F1-based design.

Strangely enough, it had come to him in a dream.

This car passed the Two-Second Test.

The Hulme takes its name from Denny Hulme, the great Kiwi driver who won the 1967 Formula One championship. New Zealand has a proud history of producing outstanding drivers, such as Bruce McLaren, Chris Amon and Scott Dixon. It has also been home to many talented automotive technicians, mechanics and engineers who have worked at the pinnacle of international motorsport.

The aim is to use this base of technical skills, combine it with car sales experience, add imaginative design and come out with something special.

There have been other flashes of success designing and building motor vehicles in New Zealand. John Britten's groundbreaking, race-winning motorbike was sold in small numbers to fans in the US and Europe, while Turnbull Engineering's Saker GT has won races in Germany and is available as a limited edition sports car. Designer Bruce Turnbull now is involved with engineering the Hulme.

Supercars Limited wants to follow the footsteps of the boat-building industry, which has built an international reputation for low volume, high-quality product, especially after New Zealand's success in the America's Cup. Some of the techniques being





used to build the car are modelled on boat-building technology.

Like the America's Cup team and Peter Jackson, the Hulme project is relying on some Kiwi ingenuity to keep costs down.

"We do have some inventive ways of doing things," Parker says. "We use appropriate technologies for the economy that we live in and the circumstances that we have got, but that doesn't mean that it's not a well-considered, well-conceived, well-designed object. It just means that you can do things in a different way."

Parker studied industrial design at the former Wellington Polytechnic, then got a scholarship to the Royal College of Art in London, where he did a masters in design. There he worked next door to people who are now at the top of the automotive design field, which makes him confident that he too can conceive a great car.

When he returned to New Zealand he worked for about seven years before returning to his roots in Wellington to teach.

During his career he has designed electric tow tractors, forklifts, gynaecological lasers, safes, toys, computers, electric fence energisers, and more.

"I've worked on security products, petrol pumps, all sorts of objects, with good teams of people and good manufacturers that have won New Zealand a considerable amount of international funds ... but one drawing of a car has given more notoriety than any of that stuff. I think it just shows that there is something deeply emotional about motor cars. Even though they may be wildly, outrageously out of our means, it doesn't matter; we are still absolutely fascinated by them, attracted to them and passionate about them."

Parker vividly remembers his father's love for cars and the care he lavished on his Jaguar. He also remembers a teacher mocking "flash" cars.

"It's just interesting how attached we become to these objects. They communicate a lot of our own values, whether we like it or not."

Some see sports cars as representing negative values – vanity, decadence and reckless speed. Parker is quick to point out that they are not encouraging people to try to imitate Michael Schumacher – at least not along Courtenay Place.

"We are not for a minute supporting the idea of some guy driving around Wellington like a Formula One driver, that would be stupid."

"I see it as a vehicle which is sort of an extreme recreation vehicle. And New Zealand is pretty good at extreme stuff."

Supercars Limited intends for Hulme buyers to be given instructions on how to handle the vehicle safely.

Parker expects the market for the Hulme to be small but potentially lucrative.

"A local entrepreneur told me recently that he was always looking for the deepest and narrowest niches. Well, I think we've found one which is pretty narrow, I just hope that it's very deep!"

So far, the signs are positive. Freemantle says that over the last 12 months, they have discussed the project and shown drawings and models to many journalists and motoring people from New Zealand and overseas.

"Everyone has said: 'It looks fantastic and exciting, if you can build it to the standard you propose, and at the price you have budgeted, you will sell as many as you can build.'"

Parker is also confident about the appeal of the Kiwi supercar.

"The indicators are that it should be all go. It certainly has a presence when you see it full-scale. You think, 'Oh my God!' It's exciting."





A raft of new services custom-built to meet the needs of extramural students will be the best in New Zealand says Professor Ian Warrington.

Since becoming the Deputy Vice-Chancellor responsible for extramural students, Professor Warrington has been working to improve the services Massey provides and to make them available to all 20,000 extramural students.

The improved services being phased in "as soon as possible" include more regional workshops. Answering demand, there will be an emphasis on exam preparation and writing skills.

A welcome and orientation package, including a welcome pack covering all Massey's campuses and services, will be sent to all extramural students.

The Student Learning Centre is to have a greater presence on the EXMSS touring roadshows at the start of semesters, allowing more students the opportunity to meet staff and attend workshops. The overall aim, says Professor Warrington, is to retain more students and to have more succeed.

"Students have also identified the need for career and course advice, and the difficulty in identifying appropriate career paths and courses while working in isolation," Professor Warrington says. "So we're going to work closely with each of the five colleges to offer more assistance through the expanded online writing and learning link (OWLL) and through access to Career Voyage and specialist career counselling.

"OWLL will be developed to provide specific support for extramural students, and the counselling resources on the web (CROW) service will be extended."

E-mail will be one of the keys to providing better service to extramural students. The e-mail answering

## New services promised for extramural students

services provided through Student Services are to be expanded, with e-mails being responded to after hours and during weekends, "because often it is at these times that extramural students sit down and work and may need assistance".

A mentorship programme, similar to the successful Māori programme, will be available to all extramural students, and study groups will be encouraged.

Following Deakin University's example, Massey will offer a free online pre-reading service from February 2005. This will allow students to submit about 500 words and a planned structure for an assignment and to receive feedback and comment speedily.

Options including partnership are being explored, for example with Deakin. Papers could be shared, Professor Warrington says, allowing a greater range of papers, enhanced regional support and perhaps block courses.

"We have looked at the needs of our extramurals and how we can best support them. We've also taken notice of the things other people are doing and which we think we can do better. We have taken the very best of what's around."

The measures, which were approved by Council in September, will cost extramural students \$25 annually, substantially less than the costs faced by students at other institutions. The University will contribute 75 percent of the total student services package. Internal students will pay \$78.

Currently some services are accessed free by some students, some services by students paying a levy, and some services are user-pays. The new levy addresses this imbalance.

The levy also covers access to on-campus services such as health, counselling, learning and recreation. Professor Warrington is keen to collaborate and co-operate with the Massey University Extramural Student's Society (EXMSS) to achieve the best possible service delivery to extramural students.

"If we can get as many students as possible who want or need services to use them then we can get as many students as possible succeeding."

## First DBA students near graduation

An average of six students each year start the Massey Doctorate in Business Administration, the only such programme in New Zealand. The first two students to complete are expected to receive their Doctorates at graduation in May 2005.

Professor Robyn Leeming, Head of the Graduate School of Business, says most students opt to complete one paper each semester for two years – a total of 100 points – and then undertake a three-year research project for a further 200 points.

"But the taught papers are completed in such a way that at the end of the four papers the students will have completed a great deal of preparatory learning and be pretty well ready to begin their research."

The DBA has the same requirements as other doctoral study, including research approval.

"If they have a degree they must have a 2.1 or better. If they have an MBA – though most don't – they must have achieved distinction."

The students are supervised by Professor Ralph Stablein. Professor Leeming describes the MBA and DBA programmes as being as good as any programme in Australasia.

"I'm not qualified to comment on how it stacks up with the rest of the world, but I do know that our students in China are complaining to me that they are getting 'C' grades for work that their colleagues studying for American MBAs are receiving 'A's for."



MBA graduates and their families and friends celebrate in 2001.



# “You just get up and go for it.”

MASSEY talks to MBA graduate and current DBA student Keith Twaddle, who now calls Scotland home.

Keith Twaddle seems to be on his bike – or in a meeting, or on a plane – every time I call. The time difference between New Zealand and Scotland, and Keith’s intense schedule, make him a hard man to pin down. But when I do finally reach him, the MBA graduate, DBA (Doctor of Business Administration) student, director of services product marketing for a worldwide telecommunications firm, cyclist, rugby player and father of three is a phenomenon.

Energy and enthusiasm crackle down the international phone line as he explains how he rises before 5.00am and cycles round the hills of East Renfrewshire before heading to work before most people have emerged from their duvets.

“Then I come home, cook dinner, do some study and go to bed early,” he says. “And next day and I get up and do it all again.”

As well as the drive, his humour is evident. What was his first degree, I ask?

“Drinking and playing rugby. No, seriously, I was asked not to go back. I was at Canterbury and I’d made some poor subject choices, doing maths, physics, geology and chemistry.”

He was fortunate, he says, that he enjoyed many sporting and social contacts. One associate alerted him to work in the technical department at the then Post Office.

From there his star rose throughout the period of privatisation and the birth of Telecom. Moves up the management chain allowed manoeuvres to other areas of the telco, including a role in human resources. During the transition from the Post Office to Telecom he was made personal assistant to the interim chief executive, and on the establishment of Telecom he headed the human resources team for the marketing division. From Whangarei to Invercargill he recruited, using skills garnered during a visit from consultants from the US telcom giant AT&T. Later he moved to customer services and the national projects office.

Then in 1993 came a rude awakening: redundancy.

“So I established a small business with a friend, but it became very evident to me that a number of our potential customers were looking for some sort of academic qualifications to back up our practical knowledge.”

Enter the Massey University MBA programme. Professor Martin Devlin, then running the programme, gave him entry – much to Twaddle’s surprise – and then scared him out of his wits.

“When I started I thought ‘Well I’ll turn up every Saturday and do enough work to get a C for every paper and then I will have done it’. The bottom just about dropped out of my life when Martin

Devlin turned up and said anything less than a B would be unacceptable. I thought ‘holy hell, if I’m going to have to work hard enough to get a B, I might as well get an A and distinction’. So I did.”

Living in Lower Hutt, Twaddle travelled into central Wellington almost every weekend of the two-year executive programme, and studied at home during the week.

“And I just loved it. You go through life and you have a number of life-changing experiences... that was a marvellous two years of my life. The group of people we met in (the class) W9 – you couldn’t ask for a more cohesive group of people. I learned as much from my classmates as from any lecture, and I really looked forward to going and taking part.”

With the MBA (Distinction) installed on his CV, Twaddle was appointed director of customer operations for Wellington company MAS Technology. Soon afterwards, MAS merged with Silicon Valley-based Digital Microwave Corporation. The renamed organisation, Stratex Networks, designs, manufactures, services and supports digital microwave radios, an alternative to fibre optics in telecommunications networks.

“I was appointed director of business development for our global service business, and I was in New Zealand for a short period. But after three trips to the UK within six weeks my boss said to me, ‘I think you’d better find somewhere else in the world to live’.”

His option were California and the UK, and, if he chose the UK, between a sales office in Coventry and a global service centre in Glasgow.

Twaddle opted to return to his roots. He now lives in upmarket Newton Mearns, Scotland, just 20 miles from where his family left to immigrate to New Zealand in 1862. His wife is studying towards her MSc at Strathclyde University, racing him to complete his DBA, which he has scheduled for 2006.

“I’m not looking for career advancement from the DBA, but what developed as I did my MBA was a desire to understand more about strategy and business policy. As I got further up the chain it pained me to go to meetings or to be working with senior managers and talk about strategy, but not to see it, in an academic sense, being applied in many organisations.”

Twaddle has seamlessly moved from studying towards his MBA to studying extramurally for his DBA. As a veteran of business studies and of the business world, he is well placed to make some judgements.

“Certainly from all the travels I have done – and I have been to 56 countries – I have encountered lots of people with MBAs and lots of people studying for them. What we went through and the process applied gave us a good, rounded understanding of the requirements of business across a whole range of functional areas.

“A couple of people in my office are doing MBAs and there’s a constant stream of people in and out of my office of people chewing the fat – they are doing their MBAs at university in the UK, and what they are doing is not as rigorous as Massey.”

Time is getting on. This journalist has managed to chew the fat for the best part of an hour with the driven Keith Twaddle. It’s 11.00pm on a Sunday night in New Zealand, and, charged up by Twaddle’s enthusiasm, I am finding myself beginning to think of further study. Twaddle, too, is thinking ahead: he has high hopes for better weather and less wind for his 5.00am cycle tomorrow. He is immersed in his thesis, has a busy week’s work ahead and is planning more travel. Already this year he’s visited Budapest and Krakow, and attended the Tour de France.

“On Saturday I’ll get up at 4.00am and get picked up at 5.30am by taxi for the airport. I’ll be having afternoon tea (at Stratex headquarters) in San Jose.

“You just get up and go for it, don’t you?” For Keith Twaddle it appears you do.



# Environmental plots

Master's student Andy Duncan is creating a sustainable subdivision

If you want it done properly, do it yourself.

Copies of the Resource Management Act lie alongside pencil sketches of Andy Duncan's new home, drafts of his master's thesis jostling with marketing plans for his ecologically sound subdivision. The sections will go on sale around the end of this year, with interest anticipated from both New Zealand and Andy's native United Kingdom. There is no other subdivision quite like Totara Bank, where energy efficiency and sustainability are key design criteria.

The log cabin he's already built on his own Te Whiti site is testament to a will and ability to do things a little differently. Modelled loosely on properties he and partner Gail saw while travelling in Canada, the 'cabin' consists of giant Redwood trunks stacked atop each other. Inside and out, the walls are massive beams of gleaming wood, rising to a vault-like ceiling over a mezzanine level. The feeling is definitely one of being in the mountains, and although there's no snow outside there's plenty visible on the Tararua Ranges, which frame the view northwest over the Ruamahanga River.

A chartered civil engineer involved in subdivision design for seven years, Andy had become disillusioned by years of 'traditional' developments with little thought given to ecological principles. Instead, he envisaged more holistic communities, planned around a central shared village green or piazza, better use of land and – most importantly – optimum use of energy.

Land beside his lifestyle block 10 kilometres from Masterton came up for sale just as he started work on his Massey University master's degree in renewable energy systems. So Andy and partner Gail decided to take the plunge, buying two adjacent blocks of land.

Don't mistake Totara Bank development – named for the solitary tree standing on the site of Andy and Gail's future home – for a hippy commune or eco-village. Think instead of smart new homes, planned around sight lines to the stunning Tararua Ranges, the use of solar and thermal energy, fruit trees, coppices (areas of firewood trees) to provide wood for heating, and a large common area. Think expanses of native planting, a man-made lake, a walking track, a community hall and a solar-heated swimming pool.

By early spring much of the

native planting had taken place, the couple roping in "everyone we know" to plant some of the many thousands of native trees and shrubs. Pathways are under way, sections pegged out, and the single-track road access visible.

The effect is not merely environmentally cosmetic, however. Andy has planned the details that will make the development more energy efficient right from the start. The eight hectares has been divided into eight "fairly small" house lots of between 1,200 and 2,000 square metres. A further six hectares remain commonly owned land.

The greatest influence in the division is access to the sun. "Because if you've got access to the sun you can use that resource however much you want: if you don't have access, you can't use it, and that's the bottom line. I've looked at solar access at different times of the year and calculated how tall an obstacle can be in any given location before it shades someone's house and used those calculations to govern covenants to what people can do on the site.

"I also looked at site-specific details that will help people build an energy-efficient house here. For example, looking at optimum shade angles for windows so you can let sun in during winter, using the most solar energy you can for heating, without overheating in summer."



Developing the project for his thesis, Andy analysed temperature records for the locality for varying times of the year and developed a scale to work out the thermal energy requirement of the whole subdivision. With covenanted requirements for every house to perform to a certain building performance index (BPI), he was able to determine how much additional energy would be needed.

This led to a calculation based around the 1,000 coppicing trees that were planted. Like everything else on the development, the trees serve many purposes: they have been calculated to provide more than 75 percent of the thermal energy requirement for the subdivision, screen the passing road, and provide another environmental aspect, with the fast-growing *Eucalyptus nitens* and *Eucalyptus ovata* complemented by the spring-flowering colourful *Acacia dealbata* planted along the side facing the houses.

Whether or not the development will be entirely energy self-sufficient will depend on owners and their energy consumption, but the cost of sections

includes a communal 6-kilowatt wind turbine, which will provide baseline electricity. A local electricity grid has also been planned for the subdivision, allowing homeowners both to take power from it and supply it back if they generate a surplus. Because energy companies aren't keen on buying power at the moment, excess energy will be used to heat such things as a planned swimming pool, although proposed changes to the electricity regulations mean that before long it will be much easier to sell power to the national grid.

"Even things like that are more energy efficient than having eight families with their own pools, or having eight families drive miles to use a public pool."

The building performance index is an energy rating that takes into account such things as the insulation used, the building materials, the floor plan and the window size. It does not prescribe the style of the house, but at Totara Bank the larger the house, the more energy efficient it must be.

And as well as making the homes function more effectively, Andy is looking at the community. "There's a lost art to building a community if you look, for example, at the Spanish plazas and the English village green. It's a totally different method of building a town or village to what is normally seen here."

A walking track being established is allowing for the physical wellbeing of the occupants, and allowing all homeowners access to the adjacent Ruamahanga River, a popular angling river. The edible planting will be shared by all, as will the hall.

Even the wastewater will serve a purpose. Pre-treatment will be provided by an interceptor tank on each lot, with secondary treatment by recirculating sand filtration and a final fine-screen disc filtration. The treated waste will then be pumped through a subsoil drip-line and used to irrigate the native bush plantations.

Hoping that like-minded individuals will work together, Andy is setting up an incorporated society which will run the subdivision. "Initially I'll set up the rules for the society, then people can change them as they see fit – one property has one vote. Hopefully we'll have information, then guidelines, and above that covenants for the really important things."

Ongoing costs for infrastructure, including the road and pool and planting, will be met by an annual charge decided by the incorporated society: "it will vary depending on what works people want to carry out," Andy says. If someone wants to pay less 'internal rates', for example, they may agree to take responsibility for some aspect of work, or owners may choose to do no maintenance whatsoever and simply employ others.

Andy sees demand for the sections coming from



Wellington, perhaps from 'eco-minded' executives, and from overseas buyers recognising the quality of life offered in the Wairarapa. Though the sections aren't cheap – around \$200,000 – they are within reach of those considering the thriving Wairarapa property market, and they include all the communal facilities. In an area where the average turnover of a lifestyle block is 2.5 years, it could be an answer.

"Many people think they want a house in the country with land. But what they really want is a house in the country and the space around them without having the hassle of having to look after it themselves."

Though he based most of the design on aspects he felt from experience could be improved on, Andy in fact immediately met almost every requirement of the District Plan and Resource Management Act. The roading component is tiny compared to the usual in most subdivisions (almost one-third of the surface area), and he has negotiated a narrower route than required with the inclusion of passing bays. Because the road stretches along the back of each house lot, views are maximised, as is space, and he's been able to develop eight lots rather than the seven that would have been traditionally possible. Having no road between the houses and the common green also provides a safe play area for children.

Though the subdivision has all the resource consents needed and work is now more than 40 percent completed, Andy isn't finished with the bureaucratic process: he's taking Masterton District Council to task and appealing a requirement for the subdivision to pay towards the parks and reserves fund.

"I'm opposing it because the nearest reserve is 10 kilometres away in Masterton and the subdivision provides recreation and reserve facilities on site. It's \$20,000 but the point is the council should be supporting people to do the kind of things we're planning, promoting that healthy, energy-efficient lifestyle. Whilst the Council has shown interest in the proposal, if we want to encourage a change towards more sustainable living, we need councils to actively participate. Silently nodding approval is no longer good enough."

He has no problem supporting the Department of Conservation with native restoration work on the adjacent riverbank, and in fact has been doing his own riparian planting to help prevent flooding and erosion.

Originally from England, Andy studied for his BEng at Cardiff University. After a year of travel it was his partner Gail who spotted an ad for a pharmacist in Greytown. The job was offered, the pair liked the area and purchased the land on which their log cabin is built just six months later.

It was while working as a chartered engineer that Andy saw the need for change. "Most developers are totally profit oriented and just think about the cheapest, quickest way of subdividing, with little thought for people or the environment. And a lot of farmers are subdividing but they only do that when they have had a rough period and they need some money quickly."

Associate Professor Ralph Sims, Director of the Massey University Centre for Energy Research, says Totara Bank is relevant worldwide. "I have never known any subdivision that's considered a sustainable lifestyle option to the degree this one is. Internationally it's a step forward, and some of the computer modelling and ideas Andy has come up with are totally innovative."

Mr Sims says the development will help drive change in New Zealand, where it had recently take five years just to develop minimum standards of insulation. The development could be used as a model.

"If you build a house and put a solar panel on top at the moment there is nothing to stop your neighbours planting a large tree and blocking your sunshine. If we want to move into a solar-warmed world or to encourage solar water heating then we have to have regulations to prevent that from happening. So this development could serve as a model of getting the most solar gain."

The Building Research Association of New Zealand has also supported the research with a stipend, and Andy has made presentations to the Architectural Designers of New Zealand annual conference and been asked to present to the Waitakere City Council, as the scheme parallels some of their plans.

The one aspect of the scheme Andy has vacillated about is money: to make it, or not. At the moment he is planning to make a buck, though he has invested countless thousands of hours with no return as yet.

"When I first started I was aiming to just break even, but then I decided the best benefit for everybody was if I were to make as much as a straight-line subdivision. What would that say to councils? They could say to developers who came to them, 'hey you could do it this way – it's more environmentally sensitive, energy efficient, and you still make the same amount of money'. Then we might change things."

"Part of it is a gamble, but somebody has to do it, and if not now, when?"

"If what you're doing isn't better, you're just perpetuating the problems we are facing in our society and our environment."

*For more information about Andy Duncan's plans for his subdivision, visit [www.totarabank.com](http://www.totarabank.com).*





## Children's Picture Books

### The Donkey Man

Glyn Harper, illustrated by Bruce Potter

(Reed, \$14.95)

In *The Donkey Man*, writer Glyn Harper and illustrator Bruce Potter give us the story of Richard Alexander Henderson, one of a group from the Medical Corps who used donkeys to carry sick and wounded soldiers to the beach for evacuation at Gallipoli. The tale is recounted by Henderson's donkey, and Harper strikes it just right. He engages the reader (or listener), he delivers just enough detail, and he avoids all the usual traps: he is neither didactic, patronising nor overly sentimental. Many parents will be pleased to have their children make an early acquaintance with the events at Gallipoli. In the West, where we no longer have such things as beasts of burden, it is also good to be reminded of the close relationship humanity once had with horses and donkeys. Well, that's the grown-up talking.

For a more nuanced view we engaged the critical services of David Jacobs, aged eight: "It was very good. I liked it when the donkey kicked the man's bottom while he was having a drink of tea, because the man was very mean to him."

Glyn Harper is an Associate Professor of Military Studies and Director of the Centre for Defence Studies. *MW*

## Junior Non-Fiction

### A Bird In The Hand: Keeping New Zealand Wildlife Safe

Janet Hunt

(Random House, \$29.95)

*A Bird in the Hand* is not just about birds. It's about the charismatic actors of wildlife on the New Zealand stage, and it's about people. Eighteen species of endemic animals – some seriously endangered – are showcased in short, profusely illustrated chapters. Each starts with an engaging story to hook the reader, then provides a 'species passport', which gives a wealth of information.

The text is easy to read, informative and lively. The illustrations vary from line-drawings, which give the 'essence' of the animals, to full-page photographs, which are quite exceptional in their quality. The text is not only broken up into various-sized chunks but has differing background colouring to make the reading more varied and interesting.

I could find only one fault, in the chapter on moa, where the number of moa species is stated to be 11. In fact we now know there were 10 species of moa, and that in the *Dinornithidae* there are two species rather

than three. It was found that *Dinornis giganteus* were all female and *D. struthoides* all male – an extreme example of reversed sexual dimorphism in which the largest females were 150 percent taller and 280 percent heavier than the largest males! The new discovery was published in 2003, and my guess is that this book was written before the news about moa became known. In the next edition the record will no doubt be set straight.

I liked *A Bird in the Hand* a lot. It gives loads of information in a very easily assimilated form, and includes such animals as snails, peripatus and weta, which are part of the 98 percent of the fauna that most people forget. Janet Hunt should be congratulated for winning the New Zealand Post Book Awards, Children and Young Adults Book of the Year. On a personal note, I particularly enjoyed stories about the people involved in keeping our wildlife safe, because so many of them have been students and colleagues of the Ecology Group at Massey University.

Janet Hunt has a BA (Hons) from Massey. *BS*

## Non-Fiction

### The Black Prince

Graeme Hunt

(Penguin, \$45)

"Without the politicians," writes Graeme Hunt of the funeral of his enigmatic protagonist, "it would have been a remarkably simple funeral, appropriate for a man who hated ostentation and cant. The black granite headstone that eventually adorned the grave was plain with a simple inscription: 'In Loving Memory of FINTAN PATRICK WALSH Died 16th May 1963 aged 67' – nothing else. Of course, the age was wrong – Walsh's fibs in the past had seen to that – but that was part of the mystery of the Black Prince."

The passage comes late in Hunt's biography, *The Black Prince*. It would have served just as well as an introduction, reflecting as it does the ambiguous public face of the former Federation of Labour and Seamen's Union leader, one-time communist and confidant of prime ministers. The paragraph that follows, however, could only have been written by Hunt, with the knowledge he brings to this biography: "A plaque was also added to the Tuohy family monument at Patutahi Cemetery, Poverty Bay. It does not commemorate F.P. Walsh but Patrick Tuohy, and carries the inscription: 'Oh, sacred heart of Jesus, have mercy on his soul. R.I.P.'"

Hunt is by no means the first writer to have researched the life of Walsh, aka Tuohy. But because of that ambiguity – because of the 'fibs' and because Walsh was so violently hated within the influential

ranks of the trade union movement – he is the first to complete a book on the man and dare to have it published. In doing so he has drawn somewhat – but not overly – on the research of others, acknowledging their contribution. But he has also taken the biography and the perception of Walsh in a new direction by exploring his family background and relationships in Poverty Bay, in the west of Ireland and in Wellington.

He has humanised, but hardly deified, the man about whom he writes: "No one is neutral. The descendants of those with whom he crossed swords do not hesitate to disparage him in a way they would not other prominent people of his time." Yet this tough union man, writes Hunt, could be loving and sentimental, and kind beyond belief.

In tracking the activities of Walsh well beyond his notorious role in the 1951 waterfront dispute, Hunt has been able to add valuable context; in particular, background on the prime ministership of Peter Fraser. The book also lingers rewardingly on Walsh's early experience in San Francisco and his connections with the Wobblies, the Industrial Workers of the World. The union heroes (or anti-heroes) of the time – Joe Hill, 'Mother' Jones, Tom Mooney, Jim Larkin – appear briefly but vividly, while Walsh's involvement with them and their militant activities remains shadowy. It is great copy.

During his "cold warrior" period, Walsh's path crossed that of economist William Ball Sutch, who was later accused of espionage. Walsh provided information about Sutch and other alleged communists and subversives to the then Security Intelligence Bureau. Hunt has now revealed that Sutch will be the subject of his next biography: We will report on progress in the next issue of *MASSEY* magazine.

Graeme Hunt is a former extramural student and an alumnus of the University. *DB*

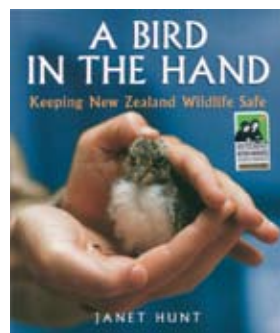
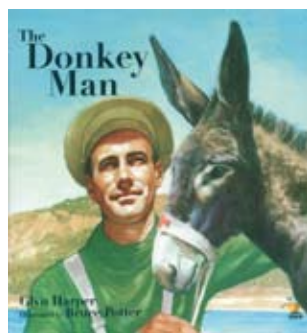
### Food Matters: A Guide to Healthy Eating and Supplements

Suzi Penny

(Massey University Institute of Food, Nutrition and Human Health, RRP \$24.95)

Consumers of publications about food and healthy eating have an apparently endless appetite. Our shelves and occasional tables groan with magazine articles, books and pamphlets examining current food issues: the Glycaemic Index, low fat versus low carbohydrate, the health pyramid, vitamin and mineral supplements, and the causes and cures for eating disorders.

Here is yet another book on health and food-related issues, but with an important difference. *Food Matters* is subtitled, modestly, as a guide to healthy eating and





supplements. It achieves rather more than that by also acting as a guide to the rest of the healthy eating literature and by having no discernible food barrow to push. Instead, author Suzi Penny – biochemist, food scientist, nutritionist, lecturer, mother and cook – provides authoritative information, leaving readers free to make their own decisions and more confident about doing so.

As her qualifications promise, Suzi Penny understands what actually happens inside the cell and the body, what nutrients are found in what food, and how the body goes about utilising those nutrients. Her background and experience also provide a practical perspective: the book's dedications acknowledge her children "for their appreciation of what I could do with \$2 worth of mince and stale bread in the years when the budget was tight", and to her parents, "who taught me, as a baker's daughter, that cooking isn't about buying expensive ingredients to follow a recipe but creative use of what is available."

The information in *Food Matters* is very accessible. It is a relief for even the most constant of health and food book readers to learn, finally, what the Glycaemic Index actually is. There is a chapter for the technically minded, which meets the needs of those who wish to go further below the surface of food jargon but also acknowledges that some of us are blinded by science. In this respect, the section with advice on how to read food labels, explaining what is relevant and what is not, is alone worth the price of the book.

Suzi Penny is an academic staff member of the Institute of Food, Nutrition and Human Health. The *Life Care* series of books are available from selected pharmacies. DB

## 'C': A Biography of Clem Scott, Rebel, Soldier, Horseman

Dennis Scott

(Hazard Press, RRP \$26.95)

'C' is Dennis Scott's biography of his father, the standard-bred horse breeder Clem Scott. As a not-at-all 'horsey' person, I was not too sure what I would make of 'C', so I was pleased to find the book an enjoyable read, particularly its first half. This begins with Clem's forbears in lowland Scotland and concludes with his return from WWII, minus a leg lost in a tank accident, and his marriage to Mary, a tram conductor. I enjoyed this at the level of social history straight-forwardly recounted through the story of an individual, who himself is typical of his generation. Clem had the virtues and failings of his circumstances and time: a larrikin charm, a love of fair play, a mistrust of authority, a sense of what he could get away with. He drank; he

gambled. As the author puts it, he had firm – we would now say antiquated – ideas about the roles of men and women. Clem's life story is a window into pre WWII Southland, the 20th Armoured Regiment's time in of Egypt and Italy, and the pre-TAB days of illegal betting with off-course bookies. The book is rich in revealing, often amusing, anecdote and detail.

For me, the second half of the book does not work as well. Again, that disclaimer – I am not a horsey person – and at times this feels like a catalogue of horses and trainers. But I suspect another reason why my interest waned has to do with the author's arrival. To maintain continuity of voice, and, I suppose, to be scrupulously fair to his father's memory, Dennis Scott appears in the third person: "The following January a second son, Dennis, was born . . ." To me this remove seems strained, and I wish the author had disclosed more of himself and switched to the riskier form of a first-person memoir. However, if you are interested in the history of standard-bred horse-racing in the South Island, no such reservation need apply.

Dennis Scott is a veterinarian based in Morrinsville, who has spent many years in the harness racing industry. Currently 'The Radio Vet' on Radio Pacific, he is also the author of *From the Terraces*, a humorous look at following the All Blacks.

## Outdoor and Experiential Learning: An Holistic and Creative Approach to Programme Design

Andy Martin, Dan Franc and Daniela Zounková  
(Gower, £49.50)

Little good came of the Cold War, but there are exceptions. From the time Churchill's "iron curtain" famously descended in 1946 until it lifted in November 1989 with the opening of the border between East and West Germany, the countries of the Eastern Bloc were largely sealed away from the market economies and material seductions of the west. During this time they followed their own evolutionary paths, becoming leaders in a number of odd specialties, including, in the case of the present-day Czech and Slovak Republics, the development of outdoor and experiential learning.

What is experiential learning? Perhaps the best known practitioners are Outward Bound, though not all forms of experiential learning need be as physically based as this. Outdoor and Experiential Learning sets out the basis for 30 games, dividing them into social, physical, creative and psychological. They include the likes of having a team paint a pointillist picture using, say, thumbs or toes; mounting a multi-day expedition into the rural countryside, perhaps working in exchange for accommodation; or playing a team

game of golf over wild terrain using tennis balls, and sticks for golf clubs.

As well as chapters on essentials such as logistics and programming, the book attends to the theory and philosophy of experiential learning.

For teachers, outdoor instructors and corporate trainers this should prove a fascinating and useful text, and a goad to go out and try something new.

Andy Martin is a senior lecturer in Sport Management and Coaching.

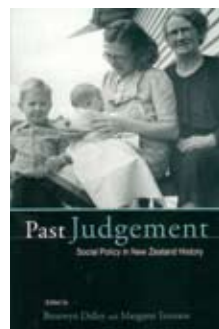
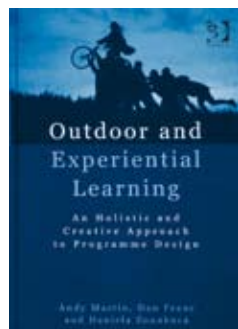
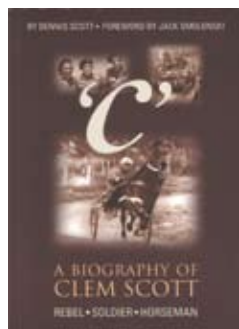
## Past Judgement: Social Policy in New Zealand History

Bronwyn Dalley and Margaret Tennant (editors)  
(University of Otago Press, \$39.95)

Bronwyn Dalley and Margaret Tennant have gathered together an interesting and informative selection of chapters on New Zealand social policies, researched and presented by experts in the field who have drawn on historical archives to enrich and support their work. The editors point out that while key players and policies are not "past judgement", the verdict of the present needs to take account of time and context, and to include an awareness of contemporary difficulties in dealing with social needs; we need to move beyond simply judging the past, to understanding it."

The collection begins with a series of generic chapters, which, the editors explain, "survey two centuries of specific issues". These include an opening discussion of social policy as a concept with a history of its own, and then a look at how historians carry out research and analysis of their findings in this area. Next comes Michael Belgrave's chapter on the welfare state, then Peter Lineham presents his views on the churches and their contribution to social policy. Chapters on mental health (by Warwick Brunton) and Māori health (Derek Dow) complete this first section and lay a solid foundation for subsequent contributions on more specific issues, such as the role of Plunket (Lynda Bryder), social security (Margaret McClure), pensions (Gaynor Whyte), family welfare (Bronwyn Labrun), child abuse (Bronwyn Dalley), and M ori Affairs (Aroha Harris) and the Treaty (Danny Keenan). The book concludes with a refreshing contribution in the form of an interview between Margaret Tennant and Merv Hancock, which illustrates the meaning of the old saying, 'The personal is political'.

This is a well researched and challenging contribution to the growing body of historical research by New Zealand historians and social workers. Margaret Tennant, for instance, speculates on whether the criticisms of state social workers voiced in documents such as *Puao-te-ata-tu* failed to give credit for ways of



working that were actually more “flexible, humane and culturally sensitive” than the way they were portrayed. This interesting question merits consideration given the information provided in the relevant chapters. Readers will be interested to know that submissions to the Ministerial Advisory Committee on a Māori Perspective for the Department of Social Welfare can now be accessed at the Alexander Turnbull Library.

This collection of essays provides many opportunities for debate and collaborative research, inviting the reader to reconsider accepted views about social policies and how they were implemented. It publicises excellent primary sources available to the researcher, and offers a variety of analytical positions for the reader to explore. We have here a welcome source of new and accessible readings for students of history, social policy and social work.

Professor Margaret Tennant is based at Massey's Palmerston North campus and specialises in the history of women and of health and social welfare in New Zealand. Bronwyn Dalley is chief historian at the Ministry for Culture and Heritage. Both are Massey alumni.

## Fiction

### The People-faces

Lisa Cherrington  
(Huia, \$29.95)

Lisa Cherrington has made sure the knowledge she gained in completing her master's thesis is accessible to those who need it. The thesis was never likely to gather dust on a shelf, though. Cherrington is a clinical psychologist and her thesis deals with the pressing issue of Māori mental health, making a comparison study of Māori and Pākehā patients diagnosed with schizophrenia.

Her novel, *The People-faces*, tells a similar story but from the inside out. “*The People-faces*”, says Cherrington, “is a narrative of my thesis – the voices and history behind people who may be seen as having a mental health disorder. I wanted the voice to not be from me as a psychologist but rather characters who were involved with the ‘patient’, and the voice of the person – in this case, ‘Joshua’.”

Cherrington, who recalls wanting to be a writer at age 10, started creative writing 15 years ago. “But it was not until age thirty that I left full-time employment to spend more time writing.”

Her short stories have been published in *Womansight* and *Te Ao Marama*, an anthology of Māori writing edited by Witi Ihimaera. In 2001 she was runner-up in the *Sunday Star-Times* short story competition. *The People-faces* is her first novel.

Lisa Cherrington (Ngati Hine, Ngapuhi) studied at Massey for her thesis and completed the clinical psychology diploma programme. She has worked as a clinical psychologist in a variety of settings, including Victoria University, focusing primarily on Māori mental health.



The Alumni and Friends office: at back Mike Freeman and Paul Hayes; at front Karen Greer, Paula Taylor and Susan Young.

What an exciting year 2004 has proven to be. In a wide range of disciplines, from Leon Oliver and Helena Webster's successes at the Dyson Product Design Award to Sarah Ulmer's win at the Olympics, Massey alumni have been out there striving for, and achieving, excellence

Here in the Office of Development and Alumni Relations we are also striving for excellence. As you will see in the following pages, our existing services have been updated and extended and we have organised more social events to celebrate your connection with Massey University. Developing an extended offering of opportunities for you, our alumni and friends, to be involved in the Massey community has also been high on our agenda.

One innovation this year was the active involvement of alumni, friends and students in the organisation and running of the annual campus reunions. Another was the scoping and initial ground work toward the development of chapters of alumni and friends, both here and overseas. It is planned that these chapters will act as the vehicles by which you will be able to readily tap into the extended Massey community. There has also been increased dialogue between groups within the university to explore and develop opportunities for you to make contributions of your knowledge and expertise to benefit students.

Massey University is a dynamic, exciting community. Through its high standard of teaching and research, it provides real and lasting benefits for our society as a whole, as well as for the people who study here. I encourage you to remain an active member of that community.

Paula Taylor

Manager

Alumni Relations

## Alumni and Friends Calendar to June 2005

### 2004

5 November	Lincoln and Massey University Old Students' Association dinner (Melbourne)
November	Christchurch Alumni and Friends After-Five function
November	Napier Alumni and Friends After-Five function
24 November	Auckland Alumni and Friends After-Five function
26 November	Palmerston North graduation
27 November	Te Aho Tatai-Rangi graduation
3 December	Palmerston North Alumni and Friends After-Five function

### 2005

14 -15 April	Auckland graduation
9 -13 May	Palmerston North graduation
26 May	Wellington graduation
27-29 May	Class of '79 Diploma in Agriculture reunion
16 June	Mystery Creek Field Days Alumni and Friends function

These details are provisional and should be confirmed with the Office of Development and Alumni Relations. Contact [alumni@massey.ac.nz](mailto:alumni@massey.ac.nz) or visit our website at <http://alumni.massey.ac.nz> to confirm. Please contact us too, if you wish to have a reunion or alumni and friends event you are organising published in this calendar.



## VISA winner off to Fiji



Master of Science extramural student Andrea Lun has won a trip for two to Fiji by applying for a Massey University Westpac Visa card.

The Bachelor of Medical Laboratory Science graduate, who lives in Auckland, was drawn from the many alumni and staff members who applied for a Massey Visa card before 31 July. Westpac donates 1 percent per annum of the monthly interest-bearing balance (or \$10 p.a., whichever is greater) from each Massey University Visa card to the Massey University Scholarship fund.

Development and Alumni Director Mike Freeman says those in the Massey alumni and staff community that choose to make the Massey Visa their credit card "can make a tremendous difference to the range of scholarships we can offer".

## New Zealand Alumni Convention Kuching 2004



Sarawak Chief Minister, Pehin Sri Abdul Taib Mahmud (centre) accompanied by New Zealand Parliament Speaker Jonathan Hunt, visiting one of the exhibition booths at the New Zealand Alumni Convention 2004 on Friday, July 9, 2004 in Kuching.



Sarawak deputy Chief Minister, Tan Sri Alfred Jabu (centre) introducing his wife, Senator Datuk Empiang Jabu to New Zealand Parliament Speaker Jonathan Hunt during the Sarawak state government hosted cocktail reception for the participants of the New Zealand Alumni Convention (NZAC) 2004 at the Kuching Hilton July 8, 2004



## 75 years of mud, sweat and tears



Past and present players of the Massey University Rugby Football Club - the country's largest - reunited over the Queen's Birthday weekend for their 75th jubilee celebrations.

The guest speaker at the dinner was Doug Rollerson - one of the MURFC's longest serving players and the Captain of Varsity A for six years and 12-test All Black. The fields are now 'bowling greens', compared to the rock-strewn paddocks he recalled, fondly, from his Massey Club days.

Dr Roger Peren, 78, also returned to re-live his historical kick-off of the Club's first game in 1929. At the time, the three-year-old Dr Peren was cheered on by his father Sir Geoffrey Peren, the Principal of the Agricultural College from 1928 - 1958.

Bad weather pushed spectators off the sidelines and into the shelter of the Rugby Institute to watch Massey's Varsity A side take a one-point win over the High School Old Boys as part of the celebrations.



Dr Geoff Watson, from the School of History, Philosophy and Politics, compiled a Jubilee booklet featuring an historical overview of the Club and team photos throughout the years.

### Massey University Rugby Football Club's All Blacks:

Michael (Mike) O'Callaghan	1968
Robert (Bob) Burgess	1971-1973
Kent Lambert	1972-1977
Doug Rollerson	1976-1981
Lachlan (Lachie) Cameron	1979- 1981
Kevin Schuler	1989- 1995
Chresten Davis	1996
Mark (Bull) Allen	1993- 1997

### Those that played for MURFC before becoming All Blacks:

Keith Gudsell	1949
John Hotop	1952- 1955
Selwyn (Mick) Bremner	1952 -1956
Keith Bagley (deceased)	1953
John Buxton	1955- 1956
Brian Molloy	1957
Wilson Whineray	1959-1965
Kelvin (Kel) Tremain (deceased)	1959- 1968
Brian Finlay (deceased)	1959
Andrew (Andy) Hayden	1972- 1985
Alasdair (Sandy) McNicol	1973
Richard Myers	1977- 1978
Jason Hewett	1991
Lee Stensness	1993-1997
R. Mark Ranby	2001

Please contact John Whitehead: 06 357 0911

Email: 75th@masseyrugby.co.nz

www.masseyrugby.co.nz

## Alumni benefits

**Discounts, benefits and services have been negotiated with the following organisations and businesses for Massey University alumni:**

### Massey University Library

Massey University alumni are granted special borrower status with the Massey University Library. An annual payment of \$100 (which is a 50 percent discount on the normal rate) entitles alumni to the borrowing privileges of an undergraduate distance student. You can borrow books in person or have them sent to you in the post within New Zealand. Contact [alumni@massey.ac.nz](mailto:alumni@massey.ac.nz) for more information.

### Massey University Visa

If you choose the Massey University Visa, Massey automatically receives a donation of 1 percent per annum on the interest earning balance or a minimum of \$10 per annum, whichever is greater, to the Massey University Scholarship fund. You can earn hotpoints to gain a range of great rewards including Air New Zealand Airpoints. For more information, or to get an application form, call 0800 888 111 (24 hours a day, seven days a week) or contact Massey University on 06 350 5865, or [alumni@massey.ac.nz](mailto:alumni@massey.ac.nz). You can also download the application form at <http://massey.alumni.ac.nz>

### Kanuka Grove Book and Resource Centre

Kanuka Grove supports Massey University alumni with a special discount of 10 percent on all trade items. Open Monday to Thursday from 8.30 am until 6.00 pm, Fridays 8.30 am until 5.00 pm and Saturday from 10.00 am to 2.00 pm. Kanuka Grove is available on-line for all book and resources at <http://kanukagrove.massey.ac.nz>. They are happy to respond to e-mail requests ([kanuka.grove@massey.ac.nz](mailto:kanuka.grove@massey.ac.nz)) for that special title, and would love to hear from you. Kanuka Grove is New Zealand's biggest teachers' resource centre, stocking a huge variety of products. These include fabulous books for children and adults, as well as educational resources more specifically focused for teachers and parents. Just drop them a line. Contact: Kathy Poulsen, Manager, Kanuka Grove, College of Education, Hokoahitu Site, Centennial Drive, Palmerston North, phone 06 3513329 fax 06 3513324.

### Career move

Massey's unique on-line career management programme is specifically designed for alumni, students and staff. The programme is provided at a special Massey rate of \$125 (incl. GST). This enables you to register on-line and access information about what you need to do to be a front-runner in today's job market, as well as activities that will sharpen your career management skills and accelerate your progress towards your career goals. For more information go to <http://careers.massey.ac.nz/careermove.html>

### TeAwa winery

Te Awa offers two of its single estate wines, a sauvignon blanc and a merlot, at a special rate for Massey University alumni and friends. For every bottle purchased, TeAwa will donate \$1 to the Massey University Scholarship Fund. So support the Scholarship Fund and toast yourself in style for your efforts with a glass of TeAwa wine. Please note that the purchase price includes freight to anywhere in New Zealand and that wine can only be purchased in 6 packs or dozens. For more information visit our website <http://alumni@massey.ac.nz> or for secure website purchases visit <https://secure.intellihost.co.nz/teawafarm.co.nz/form.php>.

## Travellers pick up discounts



Alumni and friends heading overseas can now receive a 10 percent discount at Duty Free Stores New Zealand, and help support the Massey University Scholarship fund.

The discount (excluding items on special, electronics products and cameras) is available simply by presenting a special coupon when making a purchase, or by using a code when placing an order over the Internet or by telephone.

For details about how to receive a discount, visit the Benefits & Services section of our website (<http://alumni.massey.ac.nz>) and follow the instructions under the heading *Duty Free Stores New Zealand*.

By taking advantage of this benefit, you will be supporting the Massey University Scholarship fund as Duty Free Stores New Zealand will donate \$1 for every \$50 you spend in their stores.

Offers such as this provide benefits to all concerned. It is an excellent example of how the broader Massey University community can work together to support its members. Alumni and friends of Massey University involved in businesses with suitable services or products to offer in a similar arrangement are invited to contact the Alumni and Friends Office.

Office of Development and Alumni Relations

Private Bag 11 222  
Palmerston North  
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T 64 6 350 5865  
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[alumni@massey.ac.nz](mailto:alumni@massey.ac.nz)  
<http://alumni.massey.ac.nz>

## Friends for life



Fourteen Massey alumni gathered in France for the wedding of Roseann Burgiss and Mike Olson. From left to right: Chris Craig BSc Hons 1991 (with daughter Xanthe), Megan Houlding BTech 1999, Jason Darrow BTech 1991, Gerard Olson BTech BBS BSci, Mike Olson DipBusStud DipBusAdmin MBS 1989/90/91, Heather Darrow (nee Baird) BHortSci Hons 1991, Roseann Burgiss BBS BBS Hons MBS 1989/90/91, Kate McDonald BA 1994, Derek Reid BTech 1991, Laura Ng BBS 1991, Simon Elliot BBS Law 1998, Maurice McDonald BAgSci MAgrSci 1955/58, Trent Olson BSc 1995, Andrew Robinson (with son Jamie) BBS DBS 1990.

*Massey alumnus Andrew Robinson (BBS, DBS 1990) reports from the Normandy wedding of Roseann Burgiss and Mike Olson:*

Sixty years ago Normandy hosted many brave young New Zealanders in dramatic, tragic and ultimately successful circumstances. This year, the invasion was by a delegation of Massey alumni to celebrate the wedding of Mike Olson and Roseann Burgiss.

Since studying and teaching at Massey together in the late 80s and early 90s Mike and Roseann have based themselves in Europe. During that time, they renovated a barn ("Le Hoc") in Normandy and decided to host their wedding festival at a 12th century chateau nearby.

Rose and Mike were joined by many friends and family from all corners of the world with the largest contingent Massey alumni – friends they had made 15 years ago.

"Just goes to show that friends made at Massey can be friends for life."



The worst storm in a decade didn't deter the alumni and friends of Massey University from coming out in force to celebrate at this year's Wellington campus reunion. Tours of the Conservatorium of Music, the Museum Building and the School of Design were a highlight of this year's event.



Elicio Skehong, Vice-Chancellor Professor Judith Kinnear and Francoise Webber



Claire Medcalfe shares a drop with Brett Cotter of Te Awa and Te Ua Houkamau



Christabel Gibson with Professor Ken Heskin.

The Brisbane sky literally lit up for a recent gathering of Massey alumni and friends. The spectacular Riverfire fireworks – a highlight of the annual Brisbane Riverfestival – provided a stunning backdrop to a highly successful evening. Thirty alumni and friends attended to hear the latest news from Massey, to network and to explore the possibility of establishing a Brisbane-based chapter. The meeting was designed as a preliminary session before a formal reunion is held next year with senior University management in attendance. The Office of Development and Alumni Relations is working to establish chapters in Wellington, Palmerston North, Auckland, Napier, Christchurch, Brisbane, Melbourne and Sydney during 2005.

Don White and Bert Biggs enjoyed the get-together.



More than 30 Alumni and friends gathered for the first ever Brisbane session (below).



More than 110 Massey alumni who started study in Palmerston North in 1984 returned to the city in August to rekindle friendships and visit familiar haunts. Saturday night out in Palmy was followed by brunch at the Copthorne, where most people stayed, before everyone headed home – many a little worse for wear! The group hopes to stage another reunion in Palmerston North in 10 years' time – hopefully they'll have recovered from their 20th anniversary celebrations by then!



Most of the alumni gathered at Wharerata for an informal lunch before touring the Turitea site.



The evening started at the Fitz before a meal at Costa's and a night at the Guv'nors reliving student band days. Pictured above are Andy Philips, Sue van Daatselaar and Richard Coomber.

# 4,000,000 bagels (and counting)



Megan Sargent was by no means the first New Zealander to sink her teeth into a New York bagel and dream of selling them back home. She was, however, just the girl to make it happen. Not long after taking that first bite, she called her then fiancé Brent Milburn in New Zealand and suggested they get into the bagel business immediately.

They did exactly that, and with ABE's Real Bagels, they have very quickly become major players in this country's bagel market. This year Megan and Brent will bake four million bagels or about 90,000 a week between their two bakeries in Panmure and Christchurch. The venture has been so successful that by 2002 they had made it to number 29 on the Deloitte Fast 50 list of New Zealand's fastest growing companies.

Bagels are traditional Jewish buns that have only become mainstream morsels in the past 20 years in the United States, where there is now a proliferation of bagel-selling chains across the country. Bagels are tricky to make, though, and it's not for nothing they were once dubbed or "donuts with rigour mortis" by foodies who had run into stale ones.

To learn how to make bagels, Brent travelled to the US and worked in a bakery. He also sourced equipment to set up back home. At that stage the fledgling ABE's was seriously short of finance, driven largely by determination and a very complementary mix of skills. Brent was a systems man who could fix or adapt anything. Megan was a Bachelor of Business Studies graduate with a flair for marketing.

Anxious to avoid the concrete donut syndrome and to produce a product with just a little more shelf life, they decided to steam bake their bagels. Traditional bagels (best eaten straight from the oven) are boiled then baked and ABE's are the first in New Zealand to steam bake.

ABE's are in most major supermarkets in the North Island and fast establishing their brand in the South Island. Megan says the business is growing at around 20 percent a year.

If your credit card says something about you, this one speaks volumes



The Massey University Visa card benefits both you and your university. You can earn hotpoints to gain a range of great rewards including Air New Zealand Airpoints®. And, each year your account is open, Massey University will receive a cash donation from Westpac. For more information or to get an application form call 0800 888 111 (24 hours a day, seven days a week) or contact Massey University on 06 350 5865 or [alumni@massey.ac.nz](mailto:alumni@massey.ac.nz).

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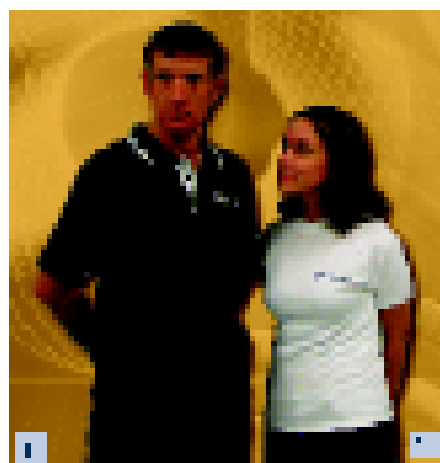
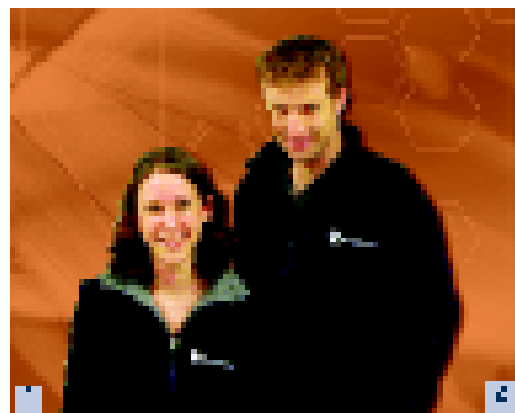
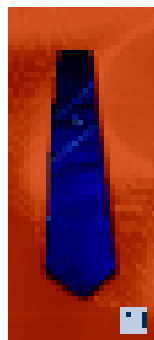
## Find a classmate

Looking for a fellow classmate, graduate or staff member? The Office of Development and Alumni has an up-to-date database containing more than 50,000 names. Email, write, phone or fax us with as many details as possible and we'll help you make contact. Please note, the Office of Development and Alumni complies with the Privacy Act and will not release personal information without permission.

## Calling all Information Systems graduates!

This has been another busy year in the Department and in the world of information technology. Dr Murray Milner from Telecom recently visited the campus to speak to information systems students. According to Dr Milner, graduates with information technology skills across the spectrum are going to be in very short supply in the near future. He was concentrating on his interest area, telecommunications, but this is a clue for graduates keeping an eye on where the industry is going in the short term. If you are interested in expanding your qualifications in Information Systems and want to find out about postgraduate study for 2005 please contact Rachael Carruthers, Academic Administrator (email [R.E.Carruthers@massey.ac.nz](mailto:R.E.Carruthers@massey.ac.nz) or phone (06) 350 5524) for more information.





Massey University

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**STRANŠTVO**

Sub-Topic	Area			
1. Introduction to the subject	Area 1			
2. Basic Concepts and Principles	Area 2			
3. Advanced Topics and Applications	Area 3			
4. Case Studies and Practical Examples	Area 4			
5. Summary and Conclusion	Area 5			
6. Further Reading and Resources	Area 6			
7. Appendix: Additional Information	Area 7			
8. Glossary of Terms	Area 8			
9. Index	Area 9			
10. Bibliography	Area 10			
11. Acknowledgments	Area 11			
12. About the Author	Area 12			
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14. Disclaimer	Area 14			
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16. Privacy Policy	Area 16			
17. Terms and Conditions	Area 17			
18. Additional Notes	Area 18			
19. Revision History	Area 19			
20. Final Remarks	Area 20			

**THE ULTIMATE**

Category	Value	Unit	Year
Production	100	kg	2018
Consumption	100	kg	2018
Inventory	100	kg	2018
Production	100	kg	2019
Consumption	100	kg	2019
Inventory	100	kg	2019
Production	100	kg	2020
Consumption	100	kg	2020
Inventory	100	kg	2020

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התאחדות המורים, 2017

## ORDER FORM

To place an order:

**FAX** this form to:

+64 (06) 350 5786

**POST** this form to: (no stamp required)

Free Post Authority 114094  
Alumni and Friends Office  
Old Registry Building  
Massey University  
Private Bag 11 222  
Palmerston North  
New Zealand

**Or drop in and see our range at the following locations:**

Alumni and Friends Office  
The Old Registry Building  
Palmerston North Campus

Contact Office  
Ground Floor, Block 4  
Wellington Campus

Contact Office  
Cashiers, Quad A  
Albany Campus

You can also download the order form from our website:  
<http://alumni.massey.ac.nz>

If you have any queries please contact us at:  
[alumni@massey.ac.nz](mailto:alumni@massey.ac.nz)

## DELIVERY DETAILS

Name (for order) \_\_\_\_\_

Delivery Address \_\_\_\_\_

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Country \_\_\_\_\_

Phone (work) \_\_\_\_\_

Phone (home) \_\_\_\_\_

Email \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

## PAYMENT METHOD

☐ Cheque (made payable to Massey University)

☐ Visa

☐ Mastercard

Credit Card Number

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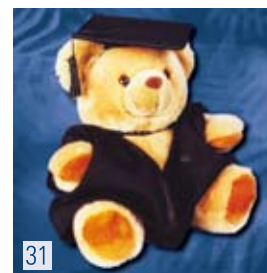


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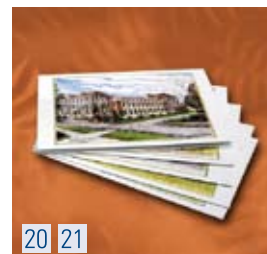
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Current high performance manager Justine Kidd has been named the new chief executive officer of Equestrian Sports New Zealand.

Kidd, 32, was already involved in the industry and supported by a strong business and sporting background, she headed off a number of high quality candidates during an intensive selection process for the top position.

The Massey University Bachelor of Agricultural Science graduate is excited about the challenges ahead and is looking forward to further promoting equestrian sports. "Equestrian sport is at an exciting stage. We have many talented riders who are making their presence felt on the international stage and with the backup of equestrian heroes such as Mark Todd and Blyth Tait their potential will be realised," Kidd said. "You only have to look at the hot competition for the Olympic equestrian team to see that the sport is in a good place to continue being one of New Zealand's most successful."

Born and raised in Te Kuiti, Kidd graduated from Massey's Palmerston North campus in 1993. She worked for the New Zealand Dairy Board as a consulting officer where she provided research and farm management advice to dairy farmers. From there she joined the Dairy Research Corporation as a farm-production research scientist.

Her next challenge was self employment. Kidd purchased a 100ha dairy farm in Huntly and employed 50% sharemilkers to milk 300 cows on this property. Alongside this investment her next challenge was a hands-on co-ownership role on a large Canterbury dairy farm milking more than

3150 cows. During this time Kidd also established her own company offering learning opportunities to individuals and businesses in all areas relating to personal leadership, people management and strategic planning.

An accomplished dressage rider, Kidd was part of the New Zealand equestrian team who travelled to South Africa 2001. She finished the top individual rider and was a member of the winning team in the African Federation Cup.

"We're in the space at the moment where Larry's created an organisation that is strong and in a sound financial position. There's been a lot of change, the sport has grown. We're bringing the disciplines together more and the next step for that is the development of those processes and communication pathways.

"The other big step forward that I see is about packaging our sport in a way that is appealing for the public and really building on that whole public profile in terms of our relationship with Sparc and our commercial relationships."

Starting her professional career at the age of 21 has Kidd well primed for some of the more testing times that lie ahead.

#### 1949

**Edwin Hutchinson**, Diploma of Agriculture (Dairy Farming), farmed at Hikurangi then Dargaville until 1960, then joined the family grocery firm and attended London College of Food Technology, Smithfield. He managed a continental smallgoods factory until 1965, eventually setting up his own business in meat processing drygoods supplies.

#### 1963

**Graeme Smith**, Bachelor Agricultural Science, has spent six months of each year in Fiji working with the Methodist Church doing prison ministry and bible school teaching, spending the other six months travelling with his wife Pam to New Zealand, Asia and America to preach and teach.

#### 1966

**Ian Hobday**, Bachelor of Agricultural Science 1967, has sold his farming interests at Whakatane and bought a dairy farm near New Plymouth. He climbed Mount Cook on 17 December 2003. "Luckily we had a great day to make the 16-hour climb from Plateau Hut."

**Judy Standish**, née Tier, Bachelor of Arts, set up a sheepskin manufacturing business in Australia and three retail shops, importing sheepskins from New Zealand and exporting to the United States and Japan. She then set up a fashion business specialising in young Australian designers and in 1991 returned to teaching.

#### 1979

**Duchesne Lavin**, Certificate in Teaching English as a Second Language, is teaching instrumental music and related work, including examining and accompanying. Duchesne has worked in Papua New Guinea and other Pacific and Asian cultures, collecting and transcribing music. "I also had published a set of songs for use in conjunction with TESL, at primary or lower secondary levels."

#### 1981

**Warwick Bennett**, Master of Arts, says his MA in Psychology has not been of any vocational value; but he has had some minor literary success. He has now given up his work in records management to take over custody of his nine-year-old son.

#### 1983

**Carol Price**, née Travers, Bachelor of Social Work, has held positions in social work training, guidance counselling, general teaching and teaching English as a foreign language in Christchurch, Vietnam and Japan. Returning home after two years in Japan, she has been catching up with friends and pursuing her creative writing. She plans to look for employment in her hometown area of Takaka, Golden Bay.

#### 1986

**Grant Chick**, Diploma in Orchard Management, travelled to the United States and studied at Ambassador College for four years, graduating with Bachelor of Arts Degree. He and his American wife moved to South Africa in 1990 where he was employed with one of South Africa's largest fertiliser companies. In 2000 he started his own marketing business.

**Jorge Ruiz Rojaz**, Diploma in Agriculture, is working as a lecturer at Universidad Autonoma de Chiapas, Mexico, in the animal science (nutrition and physiology in ruminants) field. After he finished his postgraduate Diploma in animal science at Massey University (1985), he visited former classmates in Indonesia, Malaysia, Thailand, India and Japan. "I have good memories from the time I lived in New Zealand - I send all of you my greetings and my regards. Thank-you for your friendship."

#### 1988

**Robert Farron**, Bachelor Business Studies, has had a 13-year career in banking and was recently appointed the chief financial officer of TrustPower Ltd, an energy generator and retailer with a market capitalisation of \$1.5 billion.

#### 1989

**Paula Capp**, Diploma in Agriculture, became a dairy farm manager and drystock farmer upon leaving Massey, followed by three years travelling and working overseas, during which she met her partner Muzza Handley (Dip Hort 86). On their return to New Zealand the couple spent some years saving for their "patch of dirt", but before acquiring "mortgage and kids" they spent five months in Burma, India and Nepal. In 1998 they bought at Mount Pirongia. "Now Bio Gro certified, we have organic dairy graziers, do medicinal herbs, native seedlings, wild turkeys etc. Three children keep us happy and busy - as does our land. We generate our own power and are involved in environmental issues."



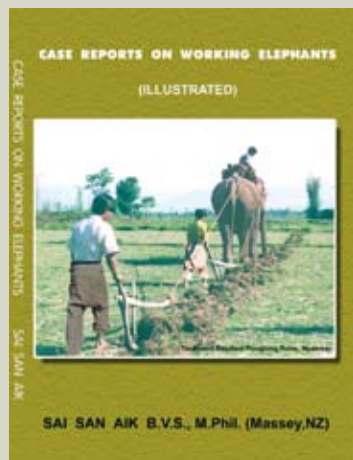
**Professor Chief Olufunke Agbeke Egunjobi**, MSc, the first African Massey alumna has been awarded one of the most prestigious honours in Nigeria.

Professor Egunjobi was decorated in December with the Officer of the Order of Niger, soon after being honoured by the alumni association of the University of Ibadan with a Distinguished Alumni Merit Award.

Professor Egunjobi was also honoured in her home state of Ekiti in November 2003, with the Pillar of development award bestowed on her by the Ekiti Parapo Media Group.

Professor Egunjobi is also Deputy Vice-Chancellor at the University of Ado-Ekiti.

"If there is anything I would cherish most sincerely it would be the opportunity to revisit Massey ... I love New Zealand, especially my alma mata, Massey," she said.



**Sai San Aik**, BVSc, MPhil (1981), has donated his book *Case Reports on Working Elephants*, to the Massey University Library.

Mr Aik said that "learning at Massey was not only from books, but also from the Massey environment and from the people there who set good examples and gave me courage to move ahead in life".

Based on his life and work in Yangon, Myanmar (formerly known as Burma), Mr Aik's book details his experience of investigating 500 elephants over a four-year period and the work to improve the lives of working elephants while advocating their humane treatment.

He says that while his work "may be just a small brick in the world knowledge of elephants, if it serves as a brick for others to add on to, I will be much satisfied and my work rewarded".

If you are associated with Massey University and are visiting Yangon (Rangoon), then Mr Aik would be happy to hear from you. Contact the Alumni office for details.



**Lisl Prendergast**, Master of Educational Administration, has completed an MA with the Institute of Education, London University, and a Masters in Religious Education with the Catholic University of Australia (2002). She is principal of the 800-pupil Sacred Heart College, Lower Hutt.

### 1990

**Jan Hardie** née Ohlson, Bachelor of Education, was a foundation member of the Broadcasting Standards Authority and a board member at NZ Hockey from 1999 to 2003. She is now self-employed.

**Bruce Haskell**, Bachelor of Business Studies, worked in direct marketing and moved to marketing contracting in 1993. "Following the big OE in 1994 I turned professional in three-day event riding (managing a local pub to pay for it!) and went offshore to England in 1999. Now running my own yard of 20 event horses in England. Not quite what I intended to do with my degree."

### 1991

**Jan Walter-Kerr**, Bachelor of Education, taught in international schools for six years but has returned to NZ. She has completed a Masters in Applied Linguistics and Masters in Education.

### 1992

**Cara Bergin-Stuart**, Bachelor of Education, last year became deputy principal at her large primary school of 700 children, after being a senior teacher for less than three years. "I won the position and am now in my second term and love it! Awesome but a challenge!"

**John Chumberpatch**, Master of Business Administration, has been executive director in sales and marketing for Firestone NZ Ltd and general manager NZ group Noel Leeming. He is currently regional general manager of the southern Department of Conservation.

### 1993

**Peter Dilg**, Master of Business Administration, returned to Germany and worked as a consultant for organisational effectiveness and process management at Compaq EMEA, "providing my services to the country management teams in 24 countries". In 2000 he formed his own consulting and coaching company 'Stepping Out & Co'. "Ever since I have full books!"

**Maria Malpass** née **Breach**, Bachelor of Business Studies, worked for a couple of years in Auckland "where I met the love of my life". After leaving New Zealand in 1995, the pair have lived and worked in Australia, the UK and Hong Kong and travelled through Malaysia, Indonesia, India, countless European countries and China before arriving in Sydney in 2000. "I now live in Sydney with my husband Ben and two boys, Jake (three) and Tobey (18 months), working part-time as a general manager for a small geographical digital mapping company."

**Lester Young**, Bachelor of Science with Honours, worked as a lab technician with MAF in Wallaceville in 1993 followed by 18 months at HortResearch at Ruakura. He moved to Saskatoon, Canada in 1995 to study for first an MSc and then a PhD in plant molecular biology. He is now working as a postdoctoral fellow at Agricultural and Agri-Food Canada, looking at developing new techniques to study seed composition. He married Lisa Jategaonkar, a Canadian, in 2000.

### 1995

**Anand Upadhyay**, Master of Business Studies, (who also holds a PGDipBusAdmin from Massey) writes: "Just wanted everyone at Massey (ex-classmates and faculty) to know that I am in India and managing my corporate training organisation called Xperientia Training Systems which is operating out of Bombay and New Delhi. We have been rated as one of the best experiential learning companies in India. Please visit our website at [www.xperientia.com](http://www.xperientia.com). I would like to officially give due credit to Massey University for our success."

### 1996

**Serekye Annor**, Maser of Agricultural Science, returned to Ghana and was employed as animal breeding co-ordinator by the Ministry of Food and Agriculture in Northern Ghana, where about 70% of the country's livestock is produced. After other appointments including Agriculture District Director, Serekye in 2003 took a new job as senior lecturer at the College of Agriculture Education in Winneba. He is teaching principles of genetics, principles of animal breeding and biometry and field experimentation while researching grasscutter and guinea fowl breeding. Serekye's wife Victoria has had two more boys, Emmanuel (1998) and Evans (2002), after their first son Peter was born in Palmerston North in 1995.

**Marion Christie** née **Rickerby**, Diploma in Social Science, is chief executive of a small community development project, The Linwood Resource Centre, in Linwood Christchurch. "We have a large community garden where we impart gardening skills as well as supporting a large number of community initiatives."

**Penny Geddis**, Bachelor of Arts, is living in Napier, where she publishes and edits *The Pagan Lantern* quarterly magazine. "I work with fellow pagans to inform and entertain the Hawkes Bay pagan community."

**Sharon McGaffin**, Bachelor of Arts, 1996, received a Royal Society New Zealand Science, Mathematics and Technology Teacher Fellowship this year to study New Zealand owls, with a project entitled 'Owl Survived in Suburbia'.

**Geoff Meade**, Bachelor of Arts, went on to study career development. He is now the owner/manager of a career consultancy employing three people in Gisborne. He also has a nashi orchard at Ormonal.

### 1997

**Razlan Ibrahim**, Bachelor of Business Studies, is based in Cyberjaya, Malaysia, working with Shell's IT arm.

**Tien Yew Ling**, Bachelor Business Studies Accountancy, is a group accountant for a listed company in Singapore. He worked with Deloitte Kassim Chan in Malaysia from 1997 to 2000 and then Chio Lim and Associates in Signapore. "I have gained lots of exposure for the past six years in audit and have had the opportunity to see various businesses and industries," he says. "It is interesting, though it is hard work."

**David Boyle**, Bachelor of Arts, is a Wellington artist who is having a children's book published. He also has a radio show at the Wellington campus and teaches guitar.

### 1998

**Rayward Chung**, Graduate Diploma in Business Studies, has enjoyed a real learning experience working in China. "Everything is so different; standards of behaviour and integrity seem to have new meaning there! I can see though why they're the 'factory' of the world and will be, if they aren't already, a power to be feared and reckoned with!"

### 2000

**Scott Dennison**, Master of Arts, is currently a press secretary for ACT New Zealand.

**Brett Dickson**, Bachelor of Technology (Hons), is moving to Sydney to implement pilot electronic health records for the New South Wales Government.

**Helen Fergusson**, Graduate Diploma in Business Studies, BA (1990) Dip Hum (1994). Worked for MUSA as editor of Chaff for a year after graduation, and then for Massey in the media department. After the big OE she moved to Christchurch, where for the last three years she has been communications manager for Harcourt's International Ltd.

**Rohaizad Hamid**, Graduate Diploma in Arts, is now a professional pilot in "the most dynamic low cost airline in Asia-Pacific region", Air Asia.

**Richard Lysnar**, Master of Arts, after running his own business consultancy since 2001, in May 2004 he was appointed business development manager for Hallmark Business Sales; an organisation with offices in Sydney, Brisbane, Noosa and the Gold Coast, and which sold over AUD\$34 million. Based at the Gold Coast office, he will be responsible for developing strategic alliances, strengthening inter-office relationships and targeting high-growth industries.

**Liz Murphy** née **Watson**, Certificate for Teacher Aides, has studied Te Ara Reo Māori at Te Wānanga O Aotearoa in Palmerston North and worked as a nanny/caregiver.

**Jennifer Phillips** née Legg, Bachelor of Education, has completed a Diploma of IT and published her fifth book *You Can Make a Web Site*. Details can be seen on her website <http://citwings.com/newsletter.html>.

**Frances Stevens** née Mckenzie, Master of Arts, is in her sixth year of tutoring 139.107 from her home in Rolleston. She has one daughter, born May 2003.

**Peter Tohill**, Graduate Diploma in Arts, concluded his term as executive director race relations office at the end of 1993. He has been a self-employed English language tutor and is now semi-retired.





**Jane Watson**, Bachelor of Education, moved to Brisbane in late 1999. She is working part-time in special needs and studying part-time for a Master/Graduate Certificate in Special Education at Griffith University.

## 2001

**David Beck**, Bachelor of Arts, has retired from primary teaching, been a worm farmer, a writer, a painter, and has started a study of homeopathy while currently working part-time at Taupo Pak 'n' Save doing the early morning fill. "Still writing, and my current project is putting the Bible into some form of free-form prose."

**Sonia Bradley-Twigg** née **Bradley**, Bachelor of Education, writes: "I completed my DipTchg at HokoWhitu campus from 1993 to 1995 and got a permanent teaching job in Palmerston North. I moved to two other schools within six years to challenge myself! During this time I completed my BEd by studying extramurally while teaching (stressful but challenging!). I did one paper each year from '97 and completed my last two papers in 2000. Extramural study was an excellent choice as it gave me the opportunity to continue doing what I love: teaching! Having e-mail contact throughout was hugely important as it kept me motivated. Now after eight-and-a-half years teaching I am teaching senior children at Russell Street School (the best in town!) and am in charge of the senior school. I love senior children and am enjoying the challenges and rewards it brings (after seven years of five and six year olds it's a definite change!). I am very proud of completing my degree. I gave myself five years to complete it and did it! Now I wonder how I managed to fit it all in!"

**Carmel Gardiner**, Bachelor of Design, is working in the fashion industry in Melbourne as a production manager. She is also a qualified diver and has enjoyed diving in New Caledonia, New Zealand and Australia.

**David Glen Johnston**, Bachelor of Aviation Management, is working on several public sector projects, including designing the National Air Ambulance Strategy.

**Kelly Maree Masters**, Bachelor of Technology, has worked at Golden Bay Cement since 2001. and enjoyed the opportunity to travel to Australia, Europe and Central America.

**Gary Severinsen**, Bachelor of Education, was last year awarded a teachers study award on full pay to do a postgraduate degree in mathematics education. "As head of mathematics at Hukare Girls College this has opened up new opportunities for me in addition to my job, the national and international publication of two academic articles, Ministerial appointments as well the desire to go on and finish a master's degree."

**Richard Shepard**, Master of Veterinary Studies, has worked as a veterinarian and epidemiologist in Australia. "This course provided me with the spark and the tools to find interesting and rewarding work." Richard is married with three children.

**Nimanthi Siriwardana**, Bachelor of Business Studies, is working for Hong Kong QNJ Co. Ltd. "Working with a foreign group has given me lots of new experience. I really enjoy working with Chinese." Nimanthi is hoping to visit China soon.

**Zofia Skrynski**, Postgraduate Diploma in Business Administration, was one of three finalists for 2002 NZIM Young Executive of the Year Award. In February 2004 she started her own business called Sophie Says Ltd. Sophie Says helps businesses and individuals in the process of dealing with, communicating with and impressing speakers of international languages.

**Kristian Vette**, Master of Philosophy (Humanities), has lived in the United Kingdom for four years, and works for the National Health Service. He has held positions at three London hospitals and is currently assistant director of operations at Ealing Hospital. In his spare time he is enjoying travelling and visiting sites he studied while at Massey's Military Studies Institute, climbing, and "generally enjoying the London lifestyle".

## 2002

**Debbie Arnold**, Bachelor of Business Studies, is now studying towards a Post Grad. Diploma in Prof. Acctg. "I am a keen 'middle of the pack' marathon runner and have competed in 12 events this year. Also ran in my first 60km mountain run - Kepler Challenge in Te Anau."

**Valda Carrington** née **Stanbridge**, Bachelor of Arts, left New Zealand to work in Perth where she managed a family accommodation programme for the Salvation Army for two years. "I had 10 to 12 homes and would house people who were unable to access housing. This involved working with homeless families, teaching them the skills of everyday living to get them motivated and self sufficient. I had a close liaison with the local TAFE and encouraged the people who came through my program to get back into the education system. This paid off, as I had a number of successes. I am now managing a Women's Refuge in Broome, working with 85 percent indigenous women. I work closely with other community agencies, as we are working with families of domestic violence instead of focusing on the women. We shelter women from Broome and outer communities and have introduced activities that are not only educational, but also teach people that violence is not a way of life and how to say no and mean it. Many of the women who access the refuge go back to violent situations, therefore we teach them coping strategies for living with violence and protecting their children."

**Chee Chow**, Bachelor of Business Studies, has returned to New Zealand after teaching in international schools for six years. Chee has completed a Masters in Applied Linguistics and Masters in Education (Guidance and Counselling).

**Seas-buan Cookson**, Bachelor of Māori Visual Arts, completed a Graduate Diploma in Teaching at Wellington College of Education, then became art teacher at Taradale Intermediate. Has given various workshops on ICT/computer graphics in education for TUANZ and Massey.

**Antje Duda**, Postgraduate Certificate in Education, is working for a youth organisation in the Catholic church in Germany, as a professional supervisor and support for the regional leadership teams. "A job I enjoy very much. I still want to finish my diploma in educational administration extramurally. I just need one more paper I will take next year. With studying I really enjoy the support I get as an extramural student. And, I also still plan to do an EdD in some years, when I can hopefully come back to NZ with my family."

**Saiful Hisham Mohd Ghazali**, Bachelor of Business Studies, has enjoyed the *MASSEY* magazine. "I have gained some knowledge about the University development and also the new discoveries. I am still doing my MBA in year two and hope to complete the course middle of next year."

**Ferdinand Lutter**, Bachelor of Education (Adult Education) is lecturing in catering studies at Massey Wellington and studying MEd (Adult Studies).

**Pataka Moore**, Bachelor of Arts, is again studying at Massey, this time a Postgraduate Diploma in Māori Resource Development. Pataka is continuing to work with eels and the freshwater environment, and is very keen on recording oral histories of elders within Ngati Raukawa. Employed by Te Wananga-O-Raukawa as a researcher and co-ordinator of Heke Matauranga Putaipo - environmental science.

**Vasco Beheregaray Neto**, Bachelor of Arts, completed an MAppSc in August 2001 and has been working for ABS Global since returning to Brazil. "Headquartered in Uberaba, Minas Gerais, Brazil, ABS Pecplan Inc. is Brazil's leading provider of bovine genetics, reproduction services, technologies and uddercare products. I work as beef product manager and I am responsible for semen importation, leasing bulls and exporting semen to South America Countries. This work gives me the chance to travel throughout Brazil and South America co-ordinating marketing and sales strategies. It is quite a challenging and exciting job which requires different kinds of knowledge. ABS has been at the forefront of animal genetics and technology since its founding in 1970. ABS Pecplan is part of ABS Global, a division of Genus plc. (UK)"

**Andrew Terwiel**, Bachelor of Science, is working as a software developer for a small IT contractor. "I am seconded to various organisations to perform software development and maintenance tasks."

## 2003

**Katie Bryant**, Bachelor of Design, became a freelance illustrator but that didn't work out. "So in 2003 I began training as a tattooist with a tattooist in Waihi. So now I have my own tattoo studio in Wellington and I'm loving it."



Takitooa Taumoepeau writes to say thanks for the last *MASSEY* and particularly the story about the new All Black Coach, Graham Henry. Takitooa, who has been the head of Government Printing in Tonga since 1994, graduated with a Diploma in Public Sector Management in 1999 after studying extramurally.

Takitooa is a keen sportsman and has often been called on to be the Chef de Mission for Tongan sports teams. He was the Chef de Mission during the 2001 South Pacific Mini Games, which were held in Norfolk Islands, for the Commonwealth Games in Manchester in 2002, and for the South Pacific Games in Suva in 2003. At the time of writing, Takitooa was looking forward to the XXVIII Olympic Games in Athens in August, where he would again be the Tonga team's Chef de Mission.

"Perhaps I will wave to all of you during the Opening Ceremony on the 13th August... just wait for when the announcement for TONGA NOC appears on the screen."

Takitooa was elected the Vice President of the Tonga National Olympic Committee in 2004.





**Verity Kent**, BEd 2004: Miami's urban sprawl is as far culturally as geographically from the Waikato farming heartland, but for Verity the grass is greener in the Florida heat.

The 23-year-old has been working as a volunteer at the Youth for Christ Miami's "Summer Daze" camps for children aged seven to 12 from lower socio-economic backgrounds. The children take part in sports and games as well as arts and crafts activities, learning to cooperate and value one another. With Miami's gang violence an everyday reality, the camp aims to break down the distrust that is a feature among children from different neighbourhoods and cultures including Cuban, Haitian, African American, and Mexican.

Verity also helps run an evening education programme for teenagers aged from 12 to 18. "These kids come from poor backgrounds but they respond really well to a safe and fun learning environment."

Verity worked as a relief teacher and fundraised in her hometown of Matamata to cover her airfare and living expenses, after graduating in 2003 from the College of Education in Palmerston North and working in the Manawatu.

She credits her degree with making the volunteer work possible.

"It has given me the practical skills and confidence to go out there and make a difference in young people's lives".

**Janet Lymburn**, Bachelor of Arts 2004, is the first New Zealander to receive a Master of Arts in Gastronomy from South Australia's University of Adelaide. This unique program results from collaboration between the University of Adelaide's Research Centre for the History of Food and Drink and the internationally acclaimed cooking school, Le Cordon Bleu and is now in its third year. There are three other New Zealanders undertaking the course at present.

Janet has an extensive background as a chef based in Wellington, most recently working for Meat NZ as a chef and food consultant. During the past four years there Janet completed her BA English extramurally through Massey before moving to Adelaide to study full time.

"It was a wonderful, if late, introduction to the joys of research and led to me moving to Adelaide to do an M.Arts in Gastronomy at Adelaide University," she said. "This is an exciting and very rigorous new course run in collaboration with Le Cordon Bleu. My BA study contributed a lot to my academic success here in Adelaide, especially the papers I did on Written Communication which I still refer back to."

Janet wrote her dissertation on the importance of gastronomic tourism to New Zealand

"Food is in a constant state of evolution and it is this aliveness that is so appealing to the traveller. Food has the ability to carry you to the heart of a travel experience and through our sensory memory readily acts as a culinary diary or photo album at the most unexpected and welcome moments." Ms Lymburn said.

**Joshua Hartwell**, Bachelor of Technology (Hons), was employed in the Lion Nathan graduate recruitment programme, and has held four different roles: brewery technician, field marketing analyst, brand assistant and project leader (operations). He is now based in Auckland.

**Hailey Hay**, Master of Educational Studies, started Massey study while living in India and completed MED Studies – mathematics, while living in Beijing and working part-time at an International School there. Now Hailey is in Adelaide teaching mathematics at Glenhung International High School, specialising in teaching mathematical applications to at-risk students.

**Karin Menon**, Bachelor of Arts (Hons) submitted her Masters thesis in business psychology in January. "However, I feel that I need to wean myself off Massey slowly. Thus I decided to take on a tutoring job in psychology, engage in research for other departments and still enjoy visiting present academic staff. I was pleased to present my own work amongst other Massey lecturers at the SASP conference in Auckland in April."

**David Neumann**, Diploma in Agriculture, moved to a 380 hectare prime beef unit in Ruawai, Northland, with pedigree Belgian Blue Cattle. "After doing a year on the place with minimal help, I have enjoyed the challenge of looking after an MP's farm (MP Lockwood Smith). Soon I'll be looking forward to taking on bigger roles, eg. share farming, to fulfil my dream of being a land owner and a New Zealand farmer."

**Mary-Pat Ross**, Bachelor of Education (primary teaching) is happy to announce she has a BT position at Kerikeri Primary School. "Last year I did relief teaching and for term four I had a .4 and a .2 position. I'm teaching Year 3, a lovely class and a fantastic supportive school."

**Paul Francis Treanor**, Bachelor of Business Studies, has been married to Sarah for 10 years, with children Hamish, age eight, and Hannah, age five. "As of 1st July I became the joint owner and director in Nexxus Financial Group, a financial planning business in Tauranga."

**Karthik Viswanathan**, Bachelor of Engineering, moved to Minnesota in the United States. "I joined Cytegra, a company specialising in Oracle RDBMS based embedded applications, as a junior Oracle developer in January of 2003. After a year with Cytegra, I took up a consulting position with Motion International who are an Oracle and eCommerce technology solutions provider. I am currently in a project at British Telecom through Motion International in London."

## 2004

**Alaric Bragg**, Bachelor of Arts, is studying towards an honour's degree in history. "At the moment I am working on a research exercise for paper 148.799, in which I am studying the history of the Savage Crescent State housing precinct in Palmerston North."

**Emma Brooks**, Bachelor of Nursing, is working in a private research facility at Wakefield Hospital in Wellington called Wakefield Gastro Enterology Research Institute. She is studying the effects of obesity and obesity weight loss surgery on adult onset Diabetes Mellitus Type 2.

**Diane Burke** formerly **Groucott**, Bachelor of Education, completed three papers in 2003 while teaching fulltime and the final paper over summer school ('03-'04) all extramurally. "I have won a teaching position at Waipa Primary, Ngaruawahia and I am looking forward to new challenges."

**Ross Crawford**, Bachelor of Aviation, chose a flying career (already private pilot). Wanganui Commercial School 1966 Flight instruction & Charter flying in Australia '67-'69. Back to Wanganui Department Chief Flying Instructor '70-'72. NAL 1972, Air NZ to present. F27, B737, B767, B747. Various administrative roles, chief training Captain (Air NZ). Currently Flight Instructor B747-400.

**Murray Cruickshank**, Bachelor of Applied Science, started his BAppSc "purely out of interest" eight semesters ago. "I found the study so enjoyable after 30 years since my last graduation."

**Vicki Douds**, Postgraduate Diploma in Arts, hopes to study clinical psychology, particularly focusing on her interest in autism.

**Katherine Gee**, Bachelor of Design, won the New Zealand Graphic Design and New Media Ambassador Award for 2004. In May 2004, she was awarded the Massey University Zonta Award for Graphic Design for 2004.

**Natalie Gooding**, Joint Bachelor of Arts/Bachelor of Business Studies, has been accepted on the JET programme in Japan.

**Hayley Marie Gourley-Moynihan**, Bachelor of Applied Economics, after nine years working for Westpac/Trust Bank latterly as an agribusiness manager, has spent the past three years working in London and travelling. "Following completion of my degree in 2003 I am currently starting an MSc in Agricultural Economics with Imperial College London."

**Denise Haereroa-Yerkovich**, Bachelor of Business Studies, graduated this year with a degree in business law. "I am a wife and mother of three teenagers ages 16, 18 and 20, and have studied for over half the children's lives. I am employed by the Australian Taxation Office – as a GST field compliance operative. I undertake audits of businesses for their GST and other tax obligations." Denise is undertaking a Postgraduate Diploma in Taxation Studies.

**Tineke Jennings**, Bachelor of Nursing, writes that despite having had her daughter McKenzie – who is now two months old – in the middle of her degree, "I have finally got to where I wanted to be, an RIV in the neonatal unit. I still aim to go back to study midwifery in the future but I'm thankful to be at the end of my first degree!"

**Trish Madison**, Bachelor of Business Studies, was a 2003 Massey Scholar. "I had no trouble obtaining a position at one of Whangarei's largest and most qualified accounting firms, and I'm loving it! I'm currently studying for a Postgrad in promotional accountancy – a little slower now I'm working."

**Amy Mitchell**, Bachelor of Arts, completed her BA in history and psychology as well as some early childhood papers, and then decided to change direction and start a Masters of Education at Victoria. "I am also studying for a Graduate Diploma of Teaching (Early childhood)."

**Takuya Nakano**, Master of Business Administration, returned to Japan (Tokyo) after graduating from Massey University in 2000, and has been working for a strategic and SCM consulting firm. "Those years at Massey was splendid, and my current business sense (logical and creative thinking, leadership, and problem solving) and communication aptitude are all based on what I had learned at Massey. I can complete and co-operate with colleagues who had graduated from top 10 universities in US. Massey or New Zealand is definitely my second home and I hope to contribute somehow in the future."

**Gloria Ryan**, Master of Nursing, completed her degree while working fulltime.

**Kithen Singh**, Bachelor of Information Sciences, finished the degree at Massey while also working at the IT unit there. "I worked a year at Massey and have now moved on and I am working for Eagle Technology in Wellington. I take with me all the experience I gained from working at Massey and am really enjoying my job."

**Yvonne Verner**, Bachelor of Arts, gave a seminar presentation at Agewise in Hamilton, *The Enabling Environment*.

**Gwenda White**, Bachelor of Arts, completed her BA as a retirement activity which gave her a great deal of pleasure. "Back in 1957, I graduated MSc in chemistry from Canterbury University College. I remember standing in the library at that time feeling somewhat wistful, that there were so many books I hadn't read and ideas that I hadn't explored. Now, thanks to the enthusiasm and expertise of the History and English staff at Albany, and the extramural staff in Philosophy and Religious Studies, I have made a starter on filling the gaps."

**Shani Wikaira**, Graduate Diploma in Journalism, has been working fulltime at Glassons and freelancing for Friends of the Dowse. Her plans are to work in the US for several months as a camp counsellor and then to travel before returning to New Zealand.







**“Massey doesn’t conform to the standard pattern in many ways,” Sir Alan Stewart told a *Manawatu Standard* reporter on the occasion of his retirement as Vice-Chancellor. The University was young and so could more easily embrace change and retain a less conservative attitude, he said. “I hope this can continue forever.”**

The interview, published on 16 December 1982, is revealing and prescient. Sir Alan had just celebrated his 65th birthday, at his last University Council meeting. He intended to “shed the cares of running a \$30 million a year university, including 500 hectares of farmland”, and to spend time mowing the lawns of a one acre section in Whakatane. He hoped to learn to cook.

He told the newspaper he had been privileged to be appointed as Vice-Chancellor on the eve of a vast expansion in university education in New Zealand and to be young enough to see it through. He recalled the expansion of the extramural programme to 300-level papers and fully extramural degrees. “Sometimes the other universities have exhibited concern about what we are doing,” he said. “I suppose we’re very successful.”

He predicted the Government would increasingly look for a return on its investments “and universities who ignore this will do so at their peril.” He was concerned about recent cutbacks in government funding and the effect this may have on hiring new staff. “You’ve got to have young people coming on to the staff all the time, to enliven it and bring a fresh outlook and in many cases, fresh knowledge.” He also hoped that Massey would one day have an engineering faculty.

Sir Alan’s association with Massey University spanned 70 of his 87 years. He was an undergraduate student in the 1930s (and president of the Students’ Association), a lecturer during the ’40s, a senior lecturer in the early ’50s, Principal of Massey Agricultural College and then Vice-Chancellor of Massey University in the ’60s, ’70s and early ’80s. He was the University’s second Rhodes Scholar.

Alan Stewart was awarded the C.B.E in 1972 and knighted in 1981. In May 1984 he was capped Doctor of Science (honoris causa) by the University. Robert Neale delivered an oration that first took the audience back to May 1959. “Today is Saturday and, deliberate of pace and profile, the newly arrived Principal of the College, Dr Alan Stewart, is using a rare moment of leisure to survey his domain – perhaps recalling his earlier connections...perhaps

## A farewell to Sir Alan Stewart, Vice-Chancellor



The Rhodes Scholar, 1941



College Principal, 1962



Vice-Chancellor, 1966



Vice-Chancellor, 1977

dreaming visions of the university one day to be, more probably realising that it is after five o’clock and Joan will have tea waiting.”

Robert Neale’s oration tracked the development of buildings on the Palmerston North campus during Alan Stewart’s time: “Up comes Colombo Hall and the Riddet Building; the Library and the Veterinary Complex, horizontal at first, vertical later” and “the Student Centre like a Brobdingnagian egg carton”, while “Business Studies, yeasty and active, bursts the seams of Old Refectory and dormitory buildings”.

It also reminded the University community of the debt it owed to his knowledge of agriculture and his appreciation of the importance of fine trees. “Alan Stewart’s love of the land has provided not only the University’s agriculturalists with an unparalleled support facility, but all of us with a working environment to dream of – as every overseas visitor reminds us.”

After Sir Alan’s death in Whakatane, the present Vice-Chancellor, Professor Judith Kinnear, noted that a cabinet minister had recently remarked that the only New Zealand university with a true international reputation is Massey because of its agriculture. “That reputation is due in no small part,” she said, “to the extraordinary contributions of Sir Alan as founding Vice-Chancellor.

As Sir Alan took his departure from Palmerston North at the end of 1982, it was clear that two things would not change: his loyalty to the institution he had shepherded from agricultural college to fully autonomous university, and his loyalty to rugby in the Manawatu. His passion for the sport and his long involvement included a term as a Manawatu representative player and as president of the Manawatu Rugby Union, a Massey University Blue and an Oxford University Blue. (He also earned a Massey Blue for swimming).

True to his word, he returned to the University many times for special events, most recently in June of this year when he attended the 75th reunion of the Massey University Rugby Football Club in Palmerston North. While he watched Massey’s Varsity A side take a one-point win over High School Old Boys, Sir Alan agreed to talk about this rugby past for a feature in *Massey News*. The young staff member (and Massey alumna) who questioned him came back deeply impressed: “He was staunch. He did the whole interview without ever once taking his eyes off the game.”

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