Beauty & bombers
What butterflies reveal about evolution and sex

Mabo Library
Honouring Eddie Mabo, gardener and legal warrior

Dead tired
Long shifts leave miners drunk with fatigue
Cover
Honours student David Jones with a blue-banded eggfly, Hypolimnas bolina, in the outdoor insectary at JCU in Cairns. Photography by Paul Dymond.

Beautiful bombers
Studying butterflies reveals a great deal about evolution and sex. Then there are lessons on beauty, colour and how to design a better stealth bomber.

Excellence in Singapore
JCU Singapore is the first Australian university accredited under Singapore’s Quality Class for Private Education Organisations.

Saving reefs
Coral reefs are not doomed – so long as we take action now, and involve those whose livelihoods depend on them.

Drunk with fatigue
Fatigue at work spells danger. Studies by the Occupational Health Research Group at JCU reveal fatigue results in effects similar to being drunk.

Mabo Library
While working as a gardener at JCU, Eddie Koiki Mabo began a long fight for his land. The library where he researched his landmark case now bears his name.

Athletes and drugs
While much research effort is devoted to the detection of doping in sport, psychologists are investigating why some athletes say yes to drugs.

Romance in the ruins
Holiday romance can be a risky business. Research conducted in Peru recommends safe sex education targeted at locals working in tourism and hospitality.

Walking with Burke and Wills
A postgraduate student is jumping feet first into his doctoral research, by walking from Melbourne to the Gulf of Carpentaria — a journey of 3,250 kilometres.

In Print
A NEW DEGREE PROGRAM LAUNCHED IN CAIRNS WILL SEE STUDENTS COMBINING CONTEMPORARY PERFORMANCE AND DIGITAL MEDIA ARTS.

“These are increasingly vital skills for the contemporary media artist,” said Professor Ryan Daniel, Head of the School of Creative Arts. Speaking at the degree launch at the Centre of Creative Arts, Professor Daniel said the new course would take advantage of the dynamic contemporary arts culture in Cairns.

“Through access to specialist studio spaces at JCU Cairns and through the creative spaces of local professional arts organisations, the students will round out their course of study with real-world experiences.”

The course is designed to give graduates a broad understanding of creative arts industries, with specialist knowledge of performance and digital media arts practice.

Career opportunities include: especially media art installations and performing arts industries; corporate communications; festivals and events; community arts; digital media arts; and video and film production.

The Bachelor of Creative Arts will be offered in Cairns from 2009.

Subjects include Improvisation and Acting Techniques, On the Edge of Text, Digital Video Techniques and Digitally Mediated Performance.

Above, video still from Bonemap’s The Exquisite Resonance of Memory. Photographer: Russell Milledge

To the rescue

“CareFlight Medical Services conducts more than 3000 aeromedical retrievals every year in Queensland alone”

A postgraduate aeromedical retrieval course has been launched by James Cook University and CareFlight Medical Services. The course has been booked out for months ahead and places are already filling for next year.

Professor Peter Leggat, from JCU’s Anton Breinl Centre for Public Health and Tropical Medicine, said the postgraduate program was offered to a broad range of health professionals including flight doctors, nurses and paramedics.

“It provides a formal and structured approach to aeromedical retrieval as well as establishing a benchmark qualification in this field,” he said.

The course includes training in aviation physiology and clinical care, as well as the flight crew skills needed for those working or proposing to work in the aeromedical retrievals industry.

“This is a big industry,” Professor Leggat said. “CareFlight Medical Services conducts more than 3000 aeromedical retrievals every year in Queensland alone.

“When you add to this the tremendous work of the Royal Flying Doctor Service, emergency services, Defence and other providers, there’s clearly a major requirement for skilled health personnel in Australia.”

More than 20 doctors, nurses and paramedics in the first class undertook a clinical placement at CareFlight’s Queensland base at Coolangatta. 〇

Distinction amongst dugongs

James Cook University’s Dean of Graduate Research Studies and Professor of Environmental Science, Helene Marsh, has received a 2008 Distinguished Service Award from the Society of Conservation Biology for her work in dugong conservation.

For more than 30 years Professor Marsh has been working on the conservation biology of the dugong.

“I was surprised and honoured to receive this award, as I didn’t know I had been nominated,” she said.

“The dugong is a threatened species with high cultural value to Indigenous Australians, so protecting the existing populations is important.”

In her work on the challenge of dugong conservation she has collaborated with researchers and research students in disciplines ranging from anthropology to zoology.

Professor Marsh has advised the governments of 11 countries and three Australian states about dugong conservation. In 2007 she was expert advisor to the Third Meeting on Dugong Conservation and Management in Abu Dhabi in the United Arab Emirates.

The Society of Conservation Biology recognises organisations and individuals who have made outstanding contributions to advancing the science and practice of conserving the Earth’s biological diversity.

Professor Marsh is one of only five researchers in the world to be honoured with this award in 2008.

www.jcu.edu.au/discover
Why butterflies prefer bling

Dr Kemp is an Australian Research Council-funded research fellow at James Cook University in Cairns, investigating the secret signals of tropical butterflies.

"Butterflies offer excellent opportunities for studying evolution and why bright colour has developed in nature," he said.

So why would a delicate, edible creature risk making itself more conspicuous to potential predators?

"In evolutionary biology we start with a cost benefit analysis of a trait. In this case the costs are probably significant. The benefit must relate to a reproductive advantage, allowing brighter males to leave more offspring, so that successive generations will each be a little bit brighter."

More than a century ago Charles Darwin proposed that male butterflies were brightly coloured because females preferred them that way, but his theory has remained largely untested.

Working in an insectary and in the field, Dr Kemp produced the first experimental evidence, finding that the females of the tropical butterfly Hypolimnas bolina prefer mates with bright ultraviolet patterns on the upper sides of their wings.

The research required patience and some delicacy, with Dr Kemp conducting lengthy observation of the courtship and copulation of over 300 butterflies in captivity, and a further 60 in the wild.

He compared the success rates of a control group of males, a group with their ultraviolet markings obscured by ink, and a group whose markings were dulled but not obscured.

Significantly, the experiment showed that having the markings dulled was as much of a mating disadvantage as having them obscured altogether.

"That tells us that it’s not enough just to have these ultraviolet markings to advertise that you’re of the correct species," Dr Kemp said.

"Female butterflies control who they mate with, and they clearly prefer to mate with the most brightly coloured males."

Since structural colour can be dimmed by wear and tear, female butterflies may be using brightness as a marker for youth in their suitors. If the colours are nutritionally costly to construct, that might also signal health and vigour.

In recent experiments, honours student David Jones has used acrylic inks to enhance the intensity of iridescent colour, investigating for the first time whether that might make the males more appealing.

While butterflies are rewarding subjects for evolutionary biologists, other researchers are interested in the mechanisms butterflies use to produce their vivid colours.

"These colours are of great interest because they result from the nano-scale structure of the wing surface, rather than from pigments," Dr Kemp said.

"In a sense butterflies are pioneers of nanotechnology, using structures of the order of one billionth of a metre to increase the visual brilliance of their wing colouration."

Butterflies may also show us how to design brilliant car paints and textiles, while their complex nano-scale structures could provide a model for anti-counterfeiting measures.

Queensland’s iconic Ulysses butterfly, Papilio ulysses, creates its dazzling blue with an array of golf ball-like structures. But it’s the black edge of the Ulysses’ wing that fascinates Dr Kemp.

"While the blue is produced by structures that promote bright reflectance, the black is created by structures that actively function to reduce the reflectance of light."

"If you want to design a surface that absorbs rather than reflects electromagnetic radiation, including light and radar, then there’s a lot you can learn from looking at butterflies. The black on a Ulysses’ wing could help us design a sneakerier stealth bomber."
Dr Darrell Kemp observed the courtship of more than 360 butterflies to test Darwin’s theory of mate selection.

Photography by Paul Dymond and Darrell Kemp
James Cook University has launched its Reconciliation Statement, with ceremonies in Townsville and Cairns.

Justice, recognition, healing

James Cook University has launched its Reconciliation Statement, with ceremonies in Townsville and Cairns.

The Statement was adopted by JCU’s Council in late 2007 and was prepared after extensive consultation lead by Professor Yvonne Cadet-James and the Vice-Chancellor’s Indigenous Advisory Group.

“It commits the University to recognise the past and look to the future,” said the Vice-Chancellor, Professor Sandra Harding.

“While the University has over many years had programs in place to provide access and support, as well as extensive engagement in research for and with Indigenous people, the Statement challenges us in a fresh way as a University community.

“The University’s future actions and achievements will be judged against the commitments made, and rightly so.”

The Reconciliation Statement can be found at www.jcu.edu.au/office/vc

New Deputy Chancellor

James Cook University’s Council has appointed a new Deputy Chancellor.

Ian Jessup, a prominent northern Queensland businessman, has replaced Ms Carmel Ross at the completion of her term as Deputy Chancellor.

Mr Jessup was a member of the inaugural accounting class at JCU in 1970, graduating in 1976 with a Bachelor of Economics in Commerce.

He is a senior partner at Jessup & Partners and a member of University Council. He has been chair of JCU’s Finance Committee since 2004.

“James Cook University played a significant part in my life,” Mr Jessup said. “I would not have had the opportunity to gain a professional qualification without its presence in Townsville, which is why I’m keen to contribute to the University to allow other northern Queensland students that same opportunity I had.”

A winner in Law

Cairns law student Rosemary Tabuai is celebrating after winning one of the five Robert Riley Scholarships awarded nationally.

The $5,000 scholarships honour the late Robert Riley, a passionate campaigner for justice and human rights.

The scholarships support Aboriginal and Torres Strait Islander students in the fields of law, human rights, child protection, criminology and criminal or juvenile justice.

Earlier this year Rosemary attended the National Youth Roundtable in Canberra, where she gave a presentation titled Stronger Families, Stronger Youth.

Launching the Reconciliation Statement on the Cairns campus. Photo: Sue Wellwood.

JCU Singapore wins top accreditation

James Cook University has claimed an historic first in Singapore.

The Singapore Campus of JCU has become the first Australian university to be awarded Singapore Quality Class for Private Education Organisations (SQC-PEO).

The SQC-PEO scheme recognises excellence in Singapore’s private education sector.

JCU Singapore will enjoy a range of benefits from its accreditation, including fast-tracked visa processing for international students and international marketing support from Singapore Government agencies.

The Vice-Chancellor and President of JCU, Professor Sandra Harding, said that the awarding of SQC-PEO further boosted JCU Singapore’s reputation as an international education leader in Singapore.

“It’s a validation of the quality of the education experience and academic delivery at JCU Singapore,” Professor Harding said.

Enrolments at JCU Singapore have grown from 50 to 1300 since opening in 2003, and The Straits Times recently named the campus among the top five international schools attracting Singaporean students.

Growth has been so strong the University is relocating to a new, more spacious campus.

JCU Singapore Chief Executive Officer Dr Dale Anderson said the awarding of SQC-PEO status acknowledged the University’s commitment to educational excellence.

“SQC-PEO certification is widely recognized as the benchmark for a credible education provider, and naturally enhances a student’s confidence in JCU Singapore,” Mr Anderson said.
That’s the message from eminent Australian marine scientist and recipient of this year’s Darwin Medal, Professor Terry Hughes. Professor Hughes is the Director of the Australian Research Council Centre of Excellence for Coral Reef Studies, based at James Cook University in Townsville.

“The global coral reef crisis is really a crisis of governance,” Professor Hughes said. “Many of the measures put in place are failing, not because of biology, but because of lack of support from local people and governments.

“For example many no-take marine reserves have been set up round the world by non-government organisations. But nearly all of them are proving unsuccessful because they ignore the needs of the local population and have failed to win their backing.”

The prestigious Darwin Medal, awarded every four years by the International Society for Reef Studies, recognises Professor Hughes’ outstanding contribution to marine and coral science.

In his Darwin Medal Lecture Professor Hughes called on coral reef researchers worldwide to work harder at the societal and economic aspects of protecting the oceans and their living resources.

“Reefs are precious for their aesthetic value, they’re incredibly beautiful, but reefs are critically important economically and socially, particularly for developing countries,” he said.

“Almost half a billion people around the world depend on reefs for their livelihood.”

On land, he argued, environmental science now accepted that people were a part of the ecosystem and that sustainable solutions had to include them and their needs. At sea, he warned, the tendency was still to try to solve the problem by excluding people entirely from marine resources.

“If you take the Coral Triangle bounded by Indonesia, Borneo and Papua New Guinea, there are around 200 million people who depend on it for their livelihoods,” he said.

“The reefs are overgrown with weed and the coral broodstock is so reduced it cannot compensate for new impact losses,” he said.

“We need to adopt a forward-looking approach, to actively navigate to the place we want to be, in terms of our environment on land and at sea.”

“This means accepting that we have changed some things permanently, and that we can choose to manage a new state, or to allow the resource to continue to decline to a point from which it may not recover.”

The world’s coral reefs are not doomed – provided governments and communities take urgent action to preserve them, and involve those whose livelihoods depend on the reefs.

Reef conservation: keep people in the picture

Reef photography by Rob Beaman

Darwin medal winner Terry Hughes

“If you take the Coral Triangle bounded by Indonesia, Borneo and Papua New Guinea, there are around 200 million people who depend on it for their livelihoods”
Few people living in northern Australia can have missed the impact of rising fuel prices on their lives. Food prices, the cost of most goods and commuting expenses are all increasing noticeably for local residents.

There is, however, another implication of the fuel price increases. The issue is what is happening to domestic and international travel behaviour. The concerns here are far reaching, not just for the region’s economy but beyond that to everyone’s expectations for holidays, conference attendance and business meetings.

In terms of international visitor arrivals the relative proportion of holiday travellers coming to Australia compared to other types of travellers is clearly declining. There are more people in the combined categories of educational travel, conference travel and business travel than those on vacation.

Of course the tourism sector has always recognised all these travellers as a part of its ambit of interest. Now though, there is a declining willingness of overseas travellers to pay the rising air fares. When this is coupled with the growing guilt about the environmental effects of long haul travel, international visitors for pleasure travel may not increase very much more.

Performing better with what we have built may become more the order of the day, rather than investing in massive new tourism and travel related infrastructure.

At the domestic level, substantial fuel-related impacts are likely to emerge very shortly. The rise of domestic holidays in this country has been built on affordable petrol, effectively fuelling the touring trip, fly-drive holidays and domestic aviation growth.

Queensland tourism has been based on the coast, the environment, the motor car and flight access. For Tasmania it has been the fly-drive visitors, and for most other states it has been family touring and beach holidays. Are these long-established patterns, all built on modest fuel prices, about to change? Can our patterns of domestic holiday taking (and more generally travel behaviour) actually continue?

Performing better with what we have built may become more the order of the day, rather than investing in massive new tourism and travel related infrastructure.

Clearly there is strong consumer motivation which can carry tourism and travel in its many forms through these first rises in fuel prices. But what might be in store for future, would-be Australian travellers? Probably less long haul travel, greater demand for diversity in regional experiences, more use of rail, cruise boats, fuel-efficient vehicles and hybrid transport types. There are also likely to be serious efforts by businesses and organisations to purchase carbon offsets and limit corporate travel.

Performing better with what we have built may become more the order of the day, rather than investing in massive new tourism and travel related infrastructure.

Above all, the challenges of rising fuel prices coupled with a suite of other global social and environmental imperatives demand a new crop of well educated tourism managers and experience designers. For a University such as James Cook with a strong reputation in tourism this may be an opportunity for aware graduates.

The tourism sector, from its built attractions to its natural settings, from accommodation to transport, needs exciting transformation to reduce energy consumption and enhance the quality of locally available experiences. Money, entrepreneurial daring and the brains of creative graduates are pre-requisites for such a future. Tourism businesses have invested in physical infrastructure with willingness and commitment. They now need to invest in their human capital with similar enthusiasm to meet the fuel challenges and forge innovative contributions to sustainable regional development.
Miners2DrunkWithFatigue.jpg

Miners drunk with fatigue

Poor concentration, impaired decision making, slowed reflexes, poor hand-to-eye coordination, short-term memory problems — these are all symptoms of fatigue. And fatigue at work spells danger.

Current studies by the Occupational Health Research Group at James Cook University have revealed that working while fatigued results in effects similar to being drunk.

The research was conducted at different fly-in, fly-out mine sites in north Queensland.

The results of one study, recently published in the Oxford Journal of Occupational Hygiene, focused on 55 miners who worked 10 consecutive 12-hour day shifts and, after a five day break, another seven consecutive 12-hour night shifts.

The results showed that after eight consecutive 12-hour day shifts, and also after their second and third night shifts, the workers were fatigued beyond the impairment expected of a blood alcohol concentration of 0.05%.

Associate Professor Reinhold Muller from the School of Public Health and Tropical Medicine said fatigue was a complex syndrome of physical and mental effects that ultimately lead to a loss of performance.

“A variety of measures were used to detail the causes and effects of fatigue, including response time tests and the physical and mental condition of the miners at the start and finish of every day and night shift,” Associate Professor Muller said.

“The miners were also asked to keep sleep and lifestyle diaries so that we were able to isolate the individual, organisational and environmental causes of fatigue.”

The tests found that fatigue was at its worst by the end of the second and third night shift.

One of the causes was found to be the disrupted sleeping pattern when the workers swapped from day to night shift.

“The effects of the transition to night shifts clearly indicate a disruption of the circadian rhythm and are a well recognised consequence of shift work,” Associate Professor Muller said.

“However, our data also delivers clear evidence that the number of consecutive night shifts should not be restricted to less than five to six shifts since the first two to three nights are the worst. Thereafter the fatigue level decreases again, when adaptation to the new rhythm takes hold.”

The study provided an opportunity to explore the effects of the miners’ individual habits as contributing factors to occupational fatigue, such as fatigue-related health problems, life-style characteristics (including alcohol consumption) and sleep characteristics.

“We were able to rule out life-style characteristics, including obesity, lack of activity and fitness and alcohol consumption as main contributors to the miners’ fatigue levels,” Associate Professor Muller said.

The study also eliminated sleep deprivation as a major risk factor for fatigue ratings and performance. Staff received adequate sleep.

The study is the first investigation to deliver clear, evidence-based results on occupational fatigue in the mining industry.

“Occupational fatigue is usually characterised as a ‘grey zone’, meaning that everyone has an opinion, but no one can be proven right or wrong due to the lack of direct evidence,” Associate Professor Muller said.

Many studies into the area of occupational fatigue used indirect measures, he said. For example, the number of hours worked were compared to the time into the shift that an injury occurred, and this was used to assess whether fatigue was a factor in causing the injury.

“This type of approach does not measure fatigue and is methodically unsound. It can only, at best, demonstrate associations with fatigue, but not provide evidence for cause-effect relationships,” Associate Professor Muller said.

The recommendations arising from the study include: reducing consecutive 12-hour day shifts to a maximum of eight days; illuminating the workplace during night shifts; scheduling power naps of 20 minute duration; ensuring the workers avoid sunlight when they finished their night shift, as even a few minutes exposure to sunlight is detrimental to miners adapting to the new night shift rhythm.

— Jo Meehan

The results showed that after eight consecutive 12-hour day shifts, and also after their second and third night shifts, the workers were fatigued beyond the impairment expected of a blood alcohol concentration of 0.05%.

Photography Fiona Melder
Honouring Eddie Koiki Mabo

Gail Mabo still brings her children out to James Cook University in Townsville to harvest the yams growing along the creek bed that slices through the campus.

She remembers as a young girl being shown where they were by her father, who had planted the yams while working at the University.

As a gardener at James Cook University in the 1970s and 80s, Eddie Mabo grew more than yams. His name is now enshrined in the history of law in Australia as the man who planted the seed of Native Title, and fought long and hard for its recognition.

His pursuit of knowledge was there even before he discovered, in a chance conversation with academics Henry Reynolds and Noel Loos, that the Crown was the owner of his traditional land back on Mer Island in the Torres Strait.

While a gardener at JCU, Mr Mabo also attended lectures, gave lectures, and forged links between Torres Strait Islander culture and the University’s academics and students.

He spent many hours in the University library doing the research that would allow him to dispute the Crown’s claim to his land.

At a Land Rights conference at JCU in 1981, Eddie Mabo spelt out what land ownership and land inheritance was all about on Mer, inspiring a long campaign to assert those rights.

Sam Passi, Father Dave Passi, James Rice and Celia Mapo Salee were also plaintiffs in the case.

Eleven long years later, in a decision that will be forever known simply as ‘Mabo’, the High Court of Australia overturned the concept of terra nullius (no man’s land) in Australia and created the idea in common law of Native Title, which was then enacted into legislative law by the Australian Parliament.

Sadly, Eddie did not live to see the outcome of his long battle, dying a few months before the decision was handed down by the High Court on June 3, 1992.

For some years now there has been a stone memorial to Eddie Koiki Mabo just outside the Central Lecture Theatre on the Douglas campus, but his name is now at the heart of the University: the library has been named in his honour at the suggestion of the Chancellor, Lt Gen John Grey.

At the official renaming the Federal Minister for Families, Housing, Community Services and Indigenous Affairs, Jenny Macklin, delivered the annual Mabo Lecture: Laying New Foundations: the way forward in Aboriginal and Torres Strait Islander policy.

Staff, students, local traditional owners, members of the Aboriginal and Torres Strait communities, politicians and the general community attended the celebrations.

Members of the Mabo family were in attendance on the day and participated in the ceremony, particularly Eddie’s wife Bonita Mabo and several of his children and grandchildren.

His daughter Gail Mabo spoke and dancers performed part of a production titled Koiki, choreographed by her.

Among other notable guests were Associate Professor Noel Loos and James Birrell, the award-winning architect who designed the Library in the 1960s, and was delighted by its new name.

As the Vice-Chancellor, Professor Sandra Harding, said: “The Eddie Koiki Mabo Library will forever commemorate the link between James Cook University and the man who changed the land laws of Australia.”

It was a day for the history books.

— Jim O’Brien
Indigenous Affairs Minister Jenny Macklin with Mrs Bonita Mabo
Left: Participants left their handprints as a record of the naming ceremony. Below: A dancer in Koiki, choreographed by Gail Mabo.

Gail Mabo (second from left) outside the library named in honour of her father, with Acting Deputy Vice-Chancellor Heather Gordon, Architect James Birrell and Vice-Chancellor Professor Sandra Harding.
Activist advisor
Gracelyn Smallwood brings 40 years’ experience as a human rights activist to her new role as special advisor on Indigenous matters to the Vice-Chancellor of James Cook University.

In JCU’s 2008 Teaching Awards, the following Faculty Citations for outstanding contributions to student learning have been awarded.

**Arts, Education and Social Sciences**
Dr Angela Hill, Education; Dr Pauline Taylor, Education; Dr Stephen Torre, Arts and Social Sciences.

**Law, Business and the Creative Arts**
Mr Clive Hutchison, Creative Arts; Professor Philip Pearce, Business; Ms Mandy Shircore, Ms Dominique Thiriet and Ms Rachel Bradshaw, Law.

**Medicine, Health and Molecular Sciences**
Dr Tom Mylne, Public Health, Tropical Medicine and Rehabilitation Sciences; Dr Lee Stewart, Prof Kim Usher, Dr Kim Foster and Mrs Joanne Tollefson, Nursing, Midwifery and Nutrition; Dr Nathan Swailes and Dr Helen Garner, Veterinary and Biomedical Sciences.

**Science, Engineering and Information Technology**
Dr D’Arcy Mullamphy, Mathematics, Physics and Information Technology; Dr Marcus Sheaves, Marine and Tropical Biology.

Passion and engagement distinguish the work of Creative Arts Lecturer Clive Hutchison, who has received the 2008 Vice-Chancellor’s Citation for outstanding contribution to student learning.

Mr Hutchison’s teaching philosophy is based on building students’ self-confidence and inspiring them to learn, be adaptable and achieve.

“It has been a strength of Clive’s teaching profile that he embeds real-world experiences in the curriculum,” said Professor Ryan Daniel, Head of the School of Creative Arts. “Students are inspired by Clive’s passion for digital imaging and his ability to connect their learning with industry.”

Born in Townsville and a traditional owner of the region, Ms Smallwood is also an Adjunct Associate Professor in the Faculty of Medicine, Health and Molecular Sciences.

She sees her new role as being to help the Vice-Chancellor in relation to Indigenous issues and with the implementation of the University’s Reconciliation Statement commitments.

“It is not just helping students in their education but also in capacity building, helping to pursue economic viability, and assisting them in closing the gap between First World health outcomes and the Third World health status many still suffer in our communities,” she said.

Associate Professor Smallwood began her education using charcoal on sheets of tin instead of paper and pen. With the strong support and encouragement of her parents and her older sister Dorothy she became a nurse, an advisor to governments, an administrator, an academic and, always, an activist.

She has developed special expertise in relation to HIV/AIDS, lecturing and receiving awards around the world for her work.

She was the first Indigenous Australian to be awarded a Master of Science in Public Health from JCU, and is now completing her doctorate on the impact of human rights violations on Aboriginal health. 😊

One of the world’s leading experts in environmental geochemistry has been attracted back to Australia with a prestigious Australian Research Council Federation Fellowship.

Professor Michael Bird will join James Cook University’s School of Earth and Environmental Sciences in Cairns, to research environmental changes, carbon cycling and human impact in tropical Australia. He is presently Professor of Environmental Change at the University of St Andrews in Scotland.

JCU Vice-Chancellor Professor Sandra Harding said that Professor Bird’s award and his decision to conduct his research at JCU upheld the University’s standing as one of Australia’s leading research institutions.

Professor Bird’s research will help to: predict the response of tropical ecosystems to future environmental changes; develop effective methodologies for improved carbon sequestration, verifiable carbon accounting and emissions trading; and, achieve sustainability in the use of natural resources.

The Federation Fellowships scheme particularly encourages researchers currently working overseas to either return or come to Australia to conduct research of significant national economic, environmental, cultural and social benefit. They provide internationally competitive salaries – in excess of $250,000 – plus start-up project funding up to $500,000.
Drugs: why some say yes

While much research effort is devoted to the detection of doping in sport, psychologists at James Cook University are investigating what motivates elite athletes to use performance-enhancing drugs and methods.

Project supervisor, Associate Professor Frances Quirk, said the project was among the first in Australia to study the issue from a psychological viewpoint.

“Until now, most research on the use of doping has been in biomedicine,” she said.

“Our research is in the field of sports and health psychology and examines the issue from a social science perspective.”

Postgraduate student Corrine Dickinson is hoping to find the ‘why’ of drug use among athletes.

“We are looking at issues surrounding the use of performance-enhancing drugs and methods in sport, with a focus on the motives,” she said.

“We hope to gather enough information to let us know what the main motives may be, and further down the track to develop those into a screening tool for trainers and coaches to be able to screen athletes who may be at risk.

“It’s really leading into prevention work, so that we can identify those who need some assistance earlier on.”

The ongoing study has already found some factors which influence the decision to use drugs including where the athletes are in their careers, injuries, major sports events, earlier use of drugs and peer pressure.

The project is part of an Australia-wide research effort focusing on enhancement methods in sport.

Associate Professor Quirk said the research so far had shown that most people wanted drugs kept out of sport.

“We’re looking at the issues of drugs in sport within society, whether people think it should be a criminal offence and how it is ranked in comparison to other issues such as mental health, child abuse, suicide and alcohol abuse,” Associate Professor Quirk said. “There are now many more opportunities to enhance performance than there used to be, and they’re developing all the time.”

Ms Dickinson has found that the ‘shame factor’ may be an overriding motivation for athletes to refrain from using drugs.

“The professional athletes that I’ve interviewed say that one of the main reasons to not use drugs is that it’s not just you it’s affecting, it’s every single person that got you where you are, which usually involves a lot of people such as friends, family and coaches.

“Drugs in sport haven’t been ranked highly compared to other issues; however, on the question ‘should Australian sport be drug free’ the majority of answers in our survey are coming up as ‘I strongly agree’,” she said.

Ms Dickinson’s research has sparked great interest from the Australian sports community and the general public.

“We have the support of the sports industry and there’s a lot of interest in the outcome of the project,” she said.

— Erik Boman
A James Cook University postgraduate student is jumping feet first into his doctoral research, by walking from Melbourne to the Gulf of Carpentaria — a journey of 3,250 kilometres.

History student David Phoenix will follow the route taken by explorers Burke and Wills, whose tale of bravery and blunder ended in death at Cooper Creek in 1861.

"They may not be Australia’s most successful explorers, but they are certainly our best known," Mr Phoenix said.

By placing himself in the landscape traversed by the two explorers, travelling at a similar pace and at the same time of year, Mr Phoenix hopes to gain insight into the role the landscape played in how the expedition progressed, and why it ultimately failed.

“Because the human side of the drama is so compelling, the landscape and its effect on the conduct of the expedition has been neglected,” he said.

Mr Phoenix said test walks conducted in two previous research projects, in which he examined the expedition’s records while travelling the route, had shed fresh light on the story.

"It’s often supposed that after returning to the Dig Tree, the explorers didn’t travel far, but in fact they made a couple of lengthy journeys in an attempt to save themselves," he said.

"They were trying to find Strzelecki Creek which would lead them to safety. After walking the area with Wills’ journals and other records, it’s clear to me that not only were they unable to identify the creek, but at one stage they actually walked across it."

"They thought the creek was a permanent water course, but they crossed it at a dry floodplain. I believe that’s where they came undone and this ultimately led to their deaths."

Although land use along the route has changed since 1861, Mr Phoenix said much of the topography remained unchanged.

"The landscape can tell us a lot about why they made the decisions and choices they made," he said.

Burke and Wills were the first explorers to cross the continent, and Mr Phoenix has been unable to find records of anyone who has walked from Melbourne to the Gulf in the century and a half since.

He expects his journey to take six months, walking six days a week. Although he is leaving Melbourne at the same time of year, his walk is not a re-enactment of the famous expedition.

"I won’t be taking 19 men, 27 camels and 43 horses," he said.

"I’ll have a friend driving a 4WD support vehicle, and we’re travelling on a shoestring budget."

"Re-enactment is not the point. My aim is to walk the same country, investigating the cultural landscape to see what it tells me about their journey."

For expedition updates, visit www.walk.burkeandwills.net.au
The Peruvian city of Cuzco was once the capital of the Inca Empire. Today it is the number-one meeting place for travellers in the region, which welcomes more than a million visitors each year.

But when Dr Irmgard Bauer visited in 2006, Cuzco’s reputation as the archaeological capital of America was not the focus of her attention.

“It is also well known as a place where casual sex between tourists and locals is increasingly available,” said Dr Bauer, a senior lecturer in JCU’s School of Nursing, Midwifery and Nutrition.

“My research interest was in getting some understanding of what motivated those relationships. Understanding people’s motives may give us a better grip on designing more promising health education strategies.”

In interviews with locals and tourists, Dr Bauer was struck by the contrast with the usual notions of holiday romance. “This is not a place where scantily clad people frolic in the sun. In Cuzco the standard garb includes a woolly jumper, hiking boots and often a beanie.”

So what is the big attraction between locals and visitors?

“In my interviews people rarely mentioned the personality of their partner,” Dr Bauer said. “The main attraction was clearly the difference in physical appearance.”

Locals valued light hair colour and green or blue eyes, while tourists spoke of long dark hair, ‘the Inca look’ and ‘the wild look’. Some were sad when their brief relationships ended, but others saw the lack of obligations as an added attraction.

“Local men spoke of tourist partners as a boon to their status and self-esteem, saying things like ‘I am a short guy, and look what I’ve got, a blond tall girl,’” Dr Bauer said.

Conventional notions of physical beauty were relaxed as locals and tourists sought partners with a touch of the exotic.

As one informant, Chico, summed it up: ‘Even the ugly ones – on both sides – have a chance in this game.’

Dr Bauer found that tourists were generally better informed about sexually transmitted infections (STI) than locals. But good intentions about condom use did not always translate into safe sex, whether it involved a romantic evening among the ruins of Machu Picchu or an encounter at a disco (or gringoteca).

“They get drunk, or they run out of condoms, or they find that local men aren’t keen on using them. Sometimes they decide things just ‘feel right’ and that condoms aren’t necessary.

“In longer-lasting relationships it’s important for people to understand that ‘the power of love’ is not an anti-microbial agent.”

One of Dr Bauer’s recommendations is that Peruvian health professionals target locals connected to tourism and hospitality for education on sexual health.

“The levels of unprotected sex and lack of STI awareness are of sufficient concern to recommend urgent action.

“Sex education in Peru’s schools is either limited or non-existent, and broad, community campaigns are unpopular in countries where the Catholic Church is so strong. Targeted education could be far more effective.

“For those giving travel health advice to tourists planning to visit the area, safe sex must be on the list. Most of us take more risks on holidays, but risking your sexual health is not worth it.”
Registered nurse Ali Drummond was lucky. His mother always stressed the importance of a healthy lifestyle.

After completing high school Ali became interested in a variety of health professions, and on returning to Thursday Island he found that JCU was offering nursing degrees.

“The chance to study on TI near my family and friends was too good to pass up,” he said.

After graduating in 2005 Ali began work as a registered nurse in the Orthopaedics Unit of Brisbane’s Princess Alexandra Hospital.

“Studying at JCU gave me confidence and prepared me for a long and successful career as a registered nurse,” he said.

“Every day is exciting, you get different cases and some very interesting patients.

Working in orthopaedics and seeing someone walk out of the ward all patched up is a great feeling.”

Ali is now working for Oxley Nursing Agency in Brisbane.

“Right now I’m gaining experience and skills in mainstream health, but my main interest has always been Indigenous health, and eventually I want to focus solely on that,” he said.

“It’s no secret that there is a shortage of nurses, so you can practically get a job anywhere! I’ve always dreamed of travelling with my nursing degree. I’m in the process of moving to Cairns, but I plan to live and work in Canada for a time.”

“I just enjoy helping people and seeing patients get better.”

Keep in touch with JCU graduates, visit www.jcu.edu.au/alumni

Winning the challenge against CQU

JCU sports stars from Townsville and Cairns have won the inaugural Sports Challenge against Central Queensland University (CQU).

The contingent of 25 included versatile sportspeople who not only excelled in their chosen sports but also joined other sporting teams to compete against CQU.

After a day of competition in various sports the scores were tied at two games apiece, and the pressure was on the netball teams to decide which University would take home the trophy.

JCU held out a late attack by the CQU team to win the deciding game by just three points.

Stand out performers for JCU were the Player of the Match winners – Matthew Curtis (cricket), Bryce Knight (rugby union), Kieran Ryan (touch football), Mitchell Williams (soccer) and Noella Green (netball).

Team manager, Chris Briody from James Cook University’s Student Association, said the Challenge would return next year, to be held in Townsville.

“Many of this year’s competitors have indicated that they’ll be back – and they’ll bring their friends with them.”

On the way to victory in Rockhampton

Inclusive awards

The Inclusive Practice Awards are presented annually to JCU staff who have demonstrated exceptional commitment to assisting students with disabilities.

The recipients are selected from nominations submitted by students with disabilities.

This year’s recipients are: Dr Janelle Rose, Lecturer, School of Business, Cairns; Mr Jeremy Gordon, Lecturer, School of Engineering, Cairns; Ms Alice Logan, Information Librarian, Cairns; Mrs Janine Sheaves, Associate Lecturer, School of Marine and Tropical Biology, Townsville; Dr Lindsay Harrington, Lecturer, School of Marine and Tropical Biology, Townsville.

The Awards acknowledge the special efforts made by staff to be flexible, consultative, proactive, and/or innovative in minimising disadvantage for students with special needs.

Recipients receive a certificate of appreciation, a $200 gift voucher, and a big vote of thanks from the Disability Resources Centre.
Graduating to crime

Mothers are supposed to love their children, aren’t they?

In her first novel Camilla Noli, mother of two and JCU graduate, explores the idea that not all women are naturally maternal and nurturing, and that resentment and frustration can result in evil thoughts and deeds.

Still Waters shows the dark side of human nature, looking beneath the façade of happy families. It tells of a woman who, upon becoming a mother, loses the two things most important to her: power and control. The result is resentment and violence.

“This book involves the truths that are not spoken, the realities that are not written about,” Camilla said. “There are some women who maybe should never have children.”

Graduating from JCU Townsville in 1988 with an arts degree with honours, Camilla pursued a career with the public service and completed an MBA at the University of Canberra.

Her honours supervisor at JCU, Professor Robert Dixon, now Chair of Australian Literature at Sydney University, gave the keynote address at the book’s launch in Sydney.

“Professor Dixon was a thoughtful and intelligent supervisor,” Camilla said. “He showed how books can make a mark on the world scene. Having him speak at my launch was wonderful.”

“Access to uni opened up a whole world of possibilities for me,” she said. “I grew up in Mossman and had never been past Townsville. The far north was very remote at the time. No one should ever underestimate the importance of regional universities.”

Still Waters is published in Australia by Hachette Livre and is due to be published in the UK next year by Orion.

www.camillanoli.com

Students on stage

Theatre students in the Bachelor of Creative Industries shone at the JUTE Theatre in Cairns with Neil LaBute’s The Distance from Here, a highly complex play by one of America’s most exciting new playwrights.

The third-year students rehearsed under the direction of JUTE’s Artistic Director, Suellen Maunder, before showcasing their directing and acting skills before an audience of industry peers.

JUTE Theatre has worked closely with JCU since 2005, establishing firm ties with the Creative Arts course and providing industry-based opportunities for students.

“Having seen a number of the students perform in community and amateur theatre over the years, I’ve been impressed by the level of skills development that is obvious in their performances since undertaking the course,” Ms Maunder said.

“They now have a considerable knowledge of the language of professional theatre that would enable them to easily fit into a professional rehearsal room. They’re well placed to move into professional practice.”

Celebrating food and faith

The annual Faith and Food Festival at JCU’s Townsville campus celebrates the diversity of our students, staff and community.

Food, dances, traditional outfits and artefacts from cultures all over the world were on show for all to enjoy at this year’s Festival, organised by the University’s Multifaith Chaplaincy.

Dancers, musicians and singers from the Pacific, Indonesia and the Indigenous Cultural Centre wowed the crowd. There was also an openhearted discussion by representatives from various religions on the topic of Creation vs Evolution.

The Multifaith Chaplaincy, coordinated by Rev Wayne Crockford, offers pastoral care to all on campus and fosters harmony and co-operation between the faiths.

For information on Chaplaincy services visit www.jcu.edu.au/office/tld/chapel

Sharing lunch and cultures at the Faith and Food Festival.
Rainforest guide
Naturalist, biologist guide and author, Damon Ramsey, is passionate about tropical Queensland’s nature and wildlife.
Damon completed his biology degree at Charles Darwin University in Darwin and JCU in Townsville and Cairns, majoring in Zoology.

“I figured if I was going to study biology then it’s best to do it where it’s at its most diverse, the tropics,” he said. “Getting my science degree was probably the best thing I’ve ever done.

“At JCU I was lucky enough to work as a research assistant for projects on cassowaries, butterflies, bandicoots, bats and rare plants.”
Damon is a founding director of Educational Tours Australia (ETA), a Cairns-based company that runs outdoor and nature-based educational programs and study tours.
He has recently published Rainforest of Tropical Australia, the first in a series of Ecosystem Guides. The book covers many aspects of the tropical rainforest including climate, ecology, insects, fish, frogs, reptiles, birds, mammals and human history.

“It’s a guide for nature enthusiasts and nature tour guides,” Damon said. “It’s pretty daunting for a tour guide and their visitors to interpret such a complex ecosystem with so many organisms. Even the locals may not realise the complexity of our rainforest.

“These rainforests include our smallest kangaroo, largest snake, biggest butterfly, largest moth and the most diverse plants, frogs and insects on the continent, and they are all featured in this book.”
Up-coming subjects in the Ecosystem Guides series include ocean surfaces, coral reefs, beaches of the tropical Indo-Pacific, and the savannah of northern Australia.

Ecosystem Guides – Rainforest of Tropical Australia
By Damon Ramsey
Educational Tours Australia
ISBN: 9780975747032

Art and identity
Le Défi Indigène: entre spectacle et politique grew out of a series of collaborations between the co-editors, Barbara Glowczewski and Rosita Henry.
Professor Glowczewski is a research fellow at the CNRS [French National Scientific Research Centre], where she coordinates the Anthropology of Perception team, a network of overseas partners, including anthropologists at JCU.
Dr Henry is the Head of Anthropology, Archaeology and Sociology at JCU.
Together they have supervised a postgraduate study program, presented papers and run a colloquium, all focussed on the topic of the politics of indigenous identity.

“The title translates as The Indigenous Challenge: between spectacle and politics,” said Dr Henry.

“Our interest is in the role of performance and spectacle in the expression of indigenous identity and agency.”

Indigenous Australian culture features in more than half the book, which also includes papers on the Festival of Pacific Arts, a Melanesian arts festival, and performances of Adevasi of India and Khantye of Siberia.
The authors include many young anthropologists exploring art and performance in various contexts.

“It is aimed at anthropologists and sociologists, but is also written in a style that’s accessible to a more general reader,” Dr Henry said.
This edition is published in French, but the editors are now working on an English version.

Le Défi Indigène: entre spectacle et politique
Edited by Barbara Glowczewski and Rosita Henry
Aux lieux d’être
ISBN: 978-2-916063-21-8

An Uneasy Legacy
The politics of the Vietnam War and the stereotyping of those who fought in it are the focus of An Uneasy Legacy by JCU political historian Dr Janine Hiddlestone.
The book examines the origins, veracity and consequences of those Vietnam stereotypes and the struggle for Vietnam veterans to locate their place in Australian history.

“I attempted to provide a perspective on a war that has a great deal of controversy attached to it. I’ve tried to place it in the context of Australian military tradition,” Dr Hiddlestone said.

“Although the book is written from an Australian perspective, I wanted it to be released in America as well because in America the role of Australians in Vietnam has long been forgotten or ignored. It gives Australian vets a voice in what has long been an American story.”

Veterans, as a group, felt dispossessed by society and therefore from history. There was no great victory to celebrate and many found it difficult to place Vietnam into the context of a proud military history.

“People’s idea of war has changed. There’s no glory and we don’t find casualties acceptable anymore,” Dr Hiddlestone said.

“The sense of adventure and responsibility is not there anymore. We still respect the people in the military but there is not so much tolerance for the death of the soldiers. War is no longer seen as a patriotic duty. We also view those who serve differently now; these days heroes are victimised heroes.”

An Uneasy Legacy
by Janine Hiddlestone
VDM Verlag Dr Mueller
ISBN: 978-3-8364-9293-5
### The calendar

#### Jo Wale Seminar
**Ageing, executive functioning and self-control**
- **Date:** Friday 29 August
- **Time:** 4.00pm
- **Location:** A21.002, JCU Cairns. Video link to MT103, JCU Townsville
- **Details:** Professor Bill von Hippel, School of Psychology, University of Queensland. This annual seminar series celebrates the professional and personal contribution of Dr Jocelyn Wale to the School of Psychology at JCU.
- **Admission:** free
- **Contact:** Michelle McClure, tel: (07) 4781 5164, e-mail: michelle.mcclure@jcu.edu.au

#### Information Evening, Cairns
**For Year 12s and their parents**
- **Date:** Wednesday 10 September
- **Time:** 6.30pm
- **Location:** JCU Cairns
- **Details:** An opportunity for Year 12s and their parents to learn about the QTAC application process, scholarships, accommodation, student life, plus more.
- **Admission:** free
- **Contact:** Rima Ismail-Jones, tel: (07) 4781 5164, e-mail: rim.i.ismailjones@jcu.edu.au

#### Information Evening, Mackay
**For Year 12s and their parents**
- **Date:** Wednesday 10 September
- **Time:** 6.30pm
- **Location:** MT103, JCU Townsville
- **Details:** An opportunity for Year 12s and their parents to learn about the QTAC application process, scholarships, accommodation, student life, plus more.
- **Admission:** free
- **Contact:** Michelle McClure, tel: (07) 4781 5164, e-mail: michelle.mcclure@jcu.edu.au

#### Jo Wale Seminar
**Apology in psychology and law**
- **Date:** Friday 12 September
- **Time:** 4.00pm
- **Location:** MT103, JCU Townsville. Video link to A21.002, JCU Cairns.
- **Details:** Professor Alfred Allan, School of Psychology and Social Science, Edith Cowan University. Dr Nic Bidwell on her experiences in designing interactions with technology to support healthcare, enterprise and community sustainability in remote Africa.
- **Admission:** free
- **Contact:** Susan Kelly, tel (07) 4042 1456, e-mail: susan.kelly@jcu.edu.au

#### Information Evening, Townsville
**For Year 12s and their parents**
- **Date:** Monday 15 September
- **Time:** 6.30pm
- **Location:** MT103, JCU Townsville.
- **Details:** An opportunity for Year 12s and their parents to learn about the QTAC application process, scholarships, accommodation, student life, plus more.
- **Admission:** free
- **Contact:** Andrew D’Arcy, tel: (07) 4951 6838, e-mail: andrew.darcy@jcu.edu.au

#### Science Seminar
**Creative technologies in mud–brick villages**
- **Date:** Wednesday 17 September
- **Time:** 5.30pm for refreshments, lecture begins at 6.00pm
- **Location:** Crowther Lecture Theatre, JCU Cairns.
- **Details:** Dr Nic Bidwell on her experiences in designing interactions with technology to support healthcare, enterprise and community sustainability in remote Africa.
- **Admission:** free
- **Contact:** Michelle McClure, tel: (07) 4781 5164, e-mail: michelle.mcclure@jcu.edu.au

#### Siemens Science Experience
**Hands–on science for schools**
- **Date:** Wednesday 1 October – Friday 3 October
- **Location:** JCU Townsville
- **Details:** Siemens Science Experience offers exciting practical activities at JCU and locations around Townsville for budding scientists.
- **Contact:** for further information and to book your school, contact Nicole Platz, tel: (07) 4781 6807, e-mail: nicole.platz@jcu.edu.au

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**Business Excellence Series in the Tropics**

The Business Excellence Series in the Tropics (BEST) is an initiative by JCU’s School of Business. BEST is a series of presentations by prominent leaders that provides an insight into differing management styles.

The School of Business will present four BEST events each year at Jupiters Townsville Hotel and Casino. The inaugural BEST event featured US Ambassador Robert McCullum.

The next BEST event will present disaster management expert Peter Baines on the 28th August at Jupiters Townsville Hotel and Casino.

Peter Baines is considered one of Australia’s most experienced disaster management specialists. He has lead national and international teams into disaster areas such as Thailand after the Tsunami, in Bali in the wake of the terrorist bombings, and local tragedies such as the Waterfall train crash in New South Wales.

For more information on BEST contact Christine O’Flynn
- **Telephone:** 07 4781 6035
- **Email:** christine.oflynn1@jcu.edu.au

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![Peter Baines](image)
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