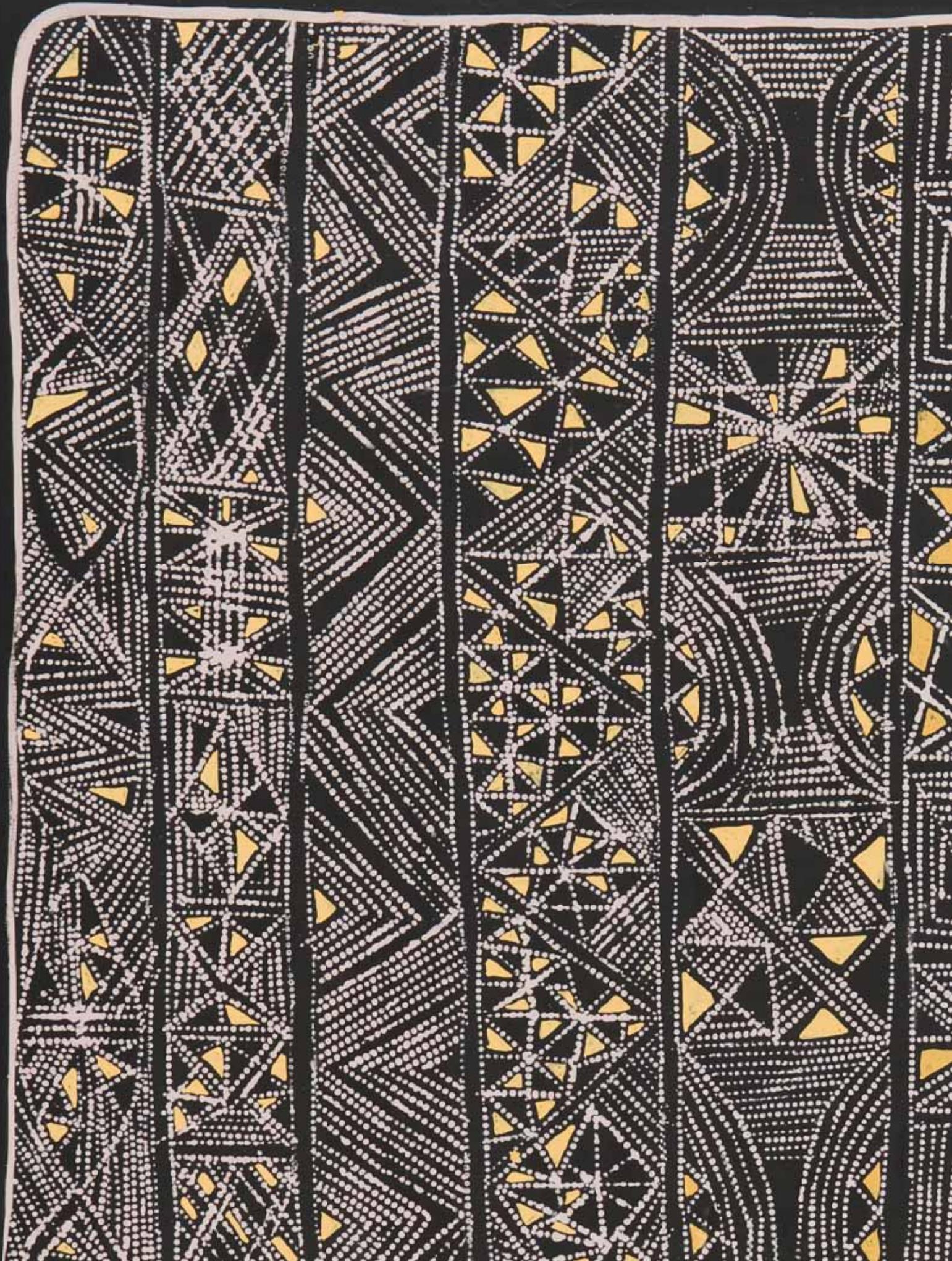


# O ORIGINS

2008 Edition 2





**12**

## **Research targets crop failure**

Breakthrough might deliver good news for farmers

**14**

## **Teaching e-tool bridges cultural gap**

New approach reaches Indigenous students

**18**

## **Biosecurity defence may begin in mangroves**

Avian influenza, migratory birds and our coastline

**19**

## **Piecing together river's puzzle**

Computer modelling gives insights to dynamic Daly

**36**

## **Using arts to build communities**

Despite its international acclaim, Indigenous art might be more significant in communities

**4** News

**29** Opinion  
Rolf Gerritsen argues for a creative approach to assisting remote Aboriginal communities

**8** First Person  
Nick McTurk discusses the parallels between east India and Indigenous Territories

**30** Q&A  
Anita Angel is curator of CDU's Art Collection

**10** Charles My Hero  
Australian Defence Chaplaincy is an evolving engagement

**32** Regional  
The Hermannsburg Potters build their techniques in Alice Springs

**11** Alumni  
Andrew Macrides is one bright spark

**38** Publishing  
News from CDU Press

**23** Limited Edition  
Minnie Lumai's etching, from the Kununurra region

*Origins* is produced by Charles Darwin University's Corporate Communications.

Editor  
Robyn McDougall

Project manager  
Meaghan Bryant

Design  
Sprout

Printer  
Finsbury Green Printing

*Corporate Communications is grateful to the following people for their contributions and assistance in compiling this edition:*

Anita Angel, Australian Army, Azlan Azad, Penny Baxter, Matthew Brearley, Anne Chivas, Christine Edwards, Football Federation Australia, Emma Fowler-Thomason, Rolf Gerritsen, Karen Gibb, Don Gowanlock, Reverend David Grulke, Hermannsburg Potters, Don Hutton, Sylvia Kliener, Letterbox, Andrew Macrides, Nick McTurk, Howard Morphy, Braedon Nelson, Kendrick Oliver, Power and Water, Naomi Smith, Chris Tayler, Lucy Tran-Nguyen, Eric Valentine, Brendan Worrell, Yothu Yindi Foundation.

Opinions and views expressed in this edition do not necessarily reflect those of Charles Darwin University. Reproduction of any material appearing in this edition requires written permission from Robyn McDougall  
robyn.mcdougall@cdu.edu.au

Published September 2008

This edition is also available at  
[www.cdu.edu.au/corporatecommunications/publications.html](http://www.cdu.edu.au/corporatecommunications/publications.html)

CRICOS Provider 00300K

Design and Printing notes  
Text face Caecilia  
Display face Meta Black Italic  
[www.sprout.com.au](http://www.sprout.com.au)

 **Finsbury Green Printing**

*Origins* is printed from vegetable-based inks and all waste and by-products of the process have been recycled into garden mulch and low-grade solvents.

The paper used in this edition of *Origins* has been manufactured under the environmental management system ISO 14001 using Elemental Chlorine Free (EFC) pulp sourced from sustainable, well managed forests.

## Contributors



**ROBYN M<sup>c</sup>DOUGALL** is a long-time newspaper editor and former journalism academic. She currently is CDU's public relations and media manager. Robyn writes several articles in this edition of *Origins*, based on interviews with CDU researchers, lecturers and former students whose work provides fascinating material for a good story.



**JASON M<sup>c</sup>INTOSH** is CDU's resident media person in Alice Springs. He enjoys capturing the motivations of staff and positive outcomes of their work through engaging pictures and words. He is also keen to articulate the ideas of extraverted academics, lecturers and researchers.



**RAQUEL DUBOIS'** writing reflects her interests in creative expression and why the world is the way it is. She is an artist and student, and currently is CDU's marketing communications officer based in Darwin. Raquel writes several articles in this edition of *Origins*, investigating the human impact of plant research and the collectability of Aboriginal art.



**RICHMOND HODGSON** is CDU's media officer based in Darwin. For this edition of *Origins*, Richie has penned features examining the integral role Indigenous arts play in building social cohesion, local research into thermal physiology, and sits down with Power and Water's chief visionary.

**COVER** Hardwired neurons **PHOTOGRAPH** Courtesy of Sprout

**INSIDE** Maria Josette Orsto | Miyinga Jilamara 2007 | Natural ochres on canvas | 120 x 90cm | CDU Art Collection  
Image courtesy the artist and Tiwi Design

## Creative solutions

The unique geography and demography of the Northern Territory influence who we are and how we approach the work of Charles Darwin University.

The Territory presents an unusual set of attributes that help to shape our daily work and the long-term vision for the University. We have a large Indigenous population for whom English might be a third or fourth language, or not one of their languages at all. We have a handful of communities with a relatively high concentration of people while the rest of the population lives in small remote communities dotted throughout a tough landscape.

As the Territory's higher education and vocational training provider, Charles Darwin University has a responsibility to contribute to the intellectual, professional, social, cultural and environmental wellbeing of our community. We have pledged this under the *Futures Framework*. It directs what we do. Our approach to our work could best be described by two defining attributes of the University, also described in the *Futures Framework*. Being "bold" and "savvy" are indispensable when we are developing solutions to meet society's needs. We have to be creative in our responses and we are in many ways.



"Creative solutions" forms the basis of this edition's main theme and the articles provide a snapshot of the creativity and responsiveness that are central to our success.

In this *Origins* you will read about PhD research that could help the agricultural industry to avoid crop failure.

We report on a teaching e-tool developed by a vocational education and training lecturer that is training Indigenous women to enter the childcare industry.

You'll read about how the world renowned Hermannsburg Potters are developing their techniques at our Alice Springs campus, how one of our graduates is making his mark in China, and you'll learn something of behind-the-scenes at the Charles Darwin University Art Collection.

This issue also focuses on the second and final Charles Darwin Symposium for the year, entitled "*Mwarre anthurre*" *Art works: Communities thrive*. The Symposium will be held in Alice Springs on 1 October and will focus discussion on the role of Indigenous arts in building social cohesion, cultural capital and business enterprise. You'll gain an introduction to the Symposium topic within these pages of *Origins*.

Elsewhere, you will read about this year's Key Forum at the Garma Festival, in which CDU hosted three days of discussion and workshops on the topic "Indigenous knowledge: Caring for culture and country".

I hope you enjoy these and the other articles, and that you gain a deeper appreciation for the great creativity that is a defining mark of our staff, students and graduates.

o

## Darwin celebrations to leave permanent artistic mark

CDU will celebrate the 200<sup>th</sup> anniversary of the birth of its namesake with a \$20,000 sculpture competition and exhibition commemorating the life and work of Charles Darwin.



ABOVE

The site of the proposed Sculpture Park on the grounds of Casuarina campus.

The Inaugural Charles Darwin University Sculpture Award and Exhibition will form the basis of a biennial acquisitive award which will create a permanent Sculpture Park at the University.

Artists with a history of involvement in the visual arts are invited to take inspiration from one of the world's greatest thinkers and enter their submissions for the award.

CDU Vice-Chancellor Professor Helen Garnett said the Sculpture Park would provide a significant cultural resource to the community.

"It is envisaged that the Sculpture Park will link the University grounds

with the local foreshore and be in keeping with the desire to be a *University without Walls*," she said.

The University, in partnership with the NT Government and the City of Darwin, will participate in the world-wide bicentenary celebrations of Darwin's life and legacy with a year-long calendar of events.

These events, many of which will be linked with Charles Darwin celebrations in the United Kingdom, will provide artists with significantly enhanced exposure.

General Manager, Curatorial Services at the Art Gallery of NSW, Anthony Bond OAM, will act as principal judge for the final panel of three judges which will select the winner of the Charles Darwin Acquisitive Award from the selected finalists. For more information on the competition visit: [www.cdu.edu.au/sculpturepark](http://www.cdu.edu.au/sculpturepark).

## Biosecurity project set to alleviate poverty

The landmark signing of a multi-million-dollar research contract is set to pave the way for a large-scale biosecurity project spanning Australia's north and eastern Indonesia.

CDU and the Cooperative Research Centre, National Plant Biosecurity have signed contracts to establish ways of managing plant pests and diseases at a regional and community level to alleviate poverty through food security.

The project, led by CDU's Professor Ian Falk and Ruth Wallace, is trialing and developing community-based strategies for identifying and managing plant pests and diseases.

"Work has already occurred with communities in northern Australia, west Timor, Bali and Sulawesi, and in the next few years will expand to include the Great Papua and Nusa Tanagra Timor more broadly," Professor Falk said.

Valued at \$1 million a year until 2012, the project uses a partnership approach in both countries.

Professor Falk said the successful management of a biosecurity threat depended on the length of time between the initial occurrence and its subsequent identification and management.

"In northern Australia and the eastern regions of Indonesia, local community participation is a key driver in the management of pests and diseases, particularly as awareness and early reporting are important strategies in reducing the time taken to identify an incursion and minimise its impacts," he said.

## Foundation recognises donors

The generosity of donors to CDU has been recognised at a CDU Foundation awards evening at which 15 awards were presented in three categories:

**Century Club, \$100,000 - \$249,999:** the Carment Family, ConocoPhillips, Friends of Greek Language and Culture NT, Fuji Xerox Australia Pty Ltd, the Ryan Family, SingTel Optus Pty Ltd, Sitzler Pty Ltd, and XBC/CSG Darwin.

**Chairman's Circle, \$250,000 - \$499,999:** Edgar Dunis, Hastings Deering (Aust) Ltd, Hewlett-Packard, and Pirates Rugby Union Football Club.

**Chancellor's Circle, \$500,000 plus:** Energy Resources of Australia Ltd, Power & Water Corporation, and Territory Insurance Office.

The CDU Foundation was established in 1993 to enhance the relationship between the University and the NT community.

## Engineers take skills back to East Timor

A unique training program initiated by CDU and ConocoPhillips has brought 11 Timorese engineers to the Top End for training aimed at furthering their careers.



ConocoPhillips approached the University's Mining, Engineering and Fabrication team for initial discussions and planning.

Program Manager, Mining, Engineering and Fabrication, David Cook said the team worked to a tight deadline, but developed a comprehensive training plan and structure.

"The main focus is to provide these students with hands-on training which can be applied in potential future roles as trainee process operators working on live processing plants," he said.

The program, which also includes numeracy and literacy support, involves two blocks of training at CDU, broken by a two-week break back home.

"The group is displaying excellent skills at this stage so we've added two extra competencies in order to recognise the group's rapid progress," Mr Cook said.

The Timorese students will have the opportunity to complete a Certificate II in Engineering as another program outcome.

○

LEFT

Timorese engineers look to a brighter career after training at Charles Darwin University.

## vHospital receives funding boost

The CDU Virtual Hospital, also known as the "vHospital", has received a significant funding boost from CDU's Faculty of Education, Health and Science.

This investment will enable four extra patient case studies to be developed, and is in addition to the two existing patient case studies already being cared for by CDU nursing students, as part of their studies in the Bachelor of Nursing.

RIGHT

"Beth Sheba" receives mock resuscitation after her car accident, as part of the creation of a case study for the vHospital.

The vHospital environment has been designed using a case study approach which allows students to assess, manage and evaluate caring for patients, from triaging them in the emergency department, through the patient journey, to treatment and discharge.

Associate Professor Isabelle Ellis, who has been developing online learning resources since 1998, said the vHospital evolved from the need



to produce authentic learning material for the nursing course's many external students.

"The virtual hospital gives students the opportunity to practise their decision-making skills on realistic and complex cases before they are placed in a real hospital environment," she said.

"Importantly, students get to watch as the consequences of their decisions play out."

The vHospital production team recently completed a day of filming at Royal Darwin Hospital to produce the third case study, Beth Sheba, who is admitted to the Charles Darwin vHospital following a car crash.

During filming, the production team used resuscitation rooms, the general ward and the surgical ward as settings to ensure the case was as authentic as possible.

○

## Academic receives \$300,000 Senior Fellowship

One of Australia's leading educators has been recognised for his ground-breaking work in integrating Yolngu culture and practices into tertiary teaching.

Associate Professor Michael Christie, of CDU's School of Education, was awarded the 2008 prestigious Senior Australian Teaching and Learning Fellowship, valued at \$300,000, at an awards seminar at the Casuarina campus.

The program planned by Dr Christie, entitled "Teaching from Country", is a reversal of the conventional distance learning set-up.

"The project plans to have students on-campus and Aboriginal knowledge workers on country in their remote communities, teaching languages and culture, including Indigenous art," Dr Christie said.

"The project will integrate and extend three ongoing collaborative research programs which have worked on the use of digital technology for traditional knowledge work, supporting homeland communities with internet connectivity, and professionalising Yolngu consultants and researchers," he said.

"The use of digital technology in this project will provide not only a video link between remote teachers and students on-campus, but a means of communicating Indigenous knowledge workers' environment and the way that they organise it.

Dr Christie said it was the organisation of objects that would create a pathway to understanding of alternative knowledge systems.

○

LEFT

Associate Professor Michael Christie, recipient of the 2008 Senior Australian Teaching and Learning Fellowship.



## CDU guitar guru tours Sardinia

The Territory's own international guitar guru Dr Adrian Walter has given sell-out performances in Sardinia with world renowned classical guitarist Carlo Barone and the Orchestra of the Academy of Nineteenth Century Music.

In duo with Carlo Barone, Dr Walter also recorded a CD and DVD featuring 19th Century guitar music during their two-week tour of the large island off the mainland of Italy.

Dr Walter, who is Dean of the Faculty of Law, Business and Arts at CDU, wowed audiences by playing an antique guitar hand-crafted by Italian violin maker Guadagnini in 1829 and a Lacote French guitar made in 1825.

The acclaimed classical guitarist formed Duo Guadagnini with Carlo Barone for the 2007 Darwin International Guitar Festival. Barone

is the director of the Academy of 19th Century Music, which features a 30-piece orchestra as a highlight of its 10-day music festival in Sardinia.

Carlo Barone is renowned for reviving pieces of 19th Century music that have not been performed for more than 200 years, while Dr Walter has toured in China, Europe and South-East Asia lecturing and playing early 19th Century guitar.

The performers gave concerts in seven towns across Sardinia including a memorable night playing in a 16th Century basilica in the town of Porto Torres.

RIGHT

World renowned classical guitarist Carlo Barone (left) with CDU's Dr Adrian Walter in a sell-out performance in Sardinia.



"It was the highlight of the trip because the natural acoustics in this magnificent basilica resonated beautifully," Dr Walter said. "It was like stepping back in time playing a Guadagnini guitar made in 1829 in a 16th Century basilica and playing the same music that was played there hundreds of years ago."

Dr Walter, who has been the artistic director for the Darwin International Guitar Festival since 1993, said playing an original 19th Century guitar with strings made from gut instead of nylon helped the musician to learn more about the music.

○



## Simone named as NT captain for national tournament

On the eve of the women's hockey under-21 national tournament, CDU's Simone Liddy can't wait to pit her skills against Australia's best emerging young talent.

Simone, a fourth-year Bachelor of Pharmacy student, was named as the Captain of the Northern Territory Women's Hockey Team as a part of the national women's under-21 championship in Hobart.

The Territory hockey star and past NT Institute of Sport scholarship holder has represented the Territory at a national level without fail since primary school.

"It's going to be a tough task, but at the same time a challenge that the team is really looking forward to," Simone said.

Simone was the first Indigenous Territorian to be awarded a pharmacy cadetship with the Department of Health and Community Services under the National Indigenous Cadetship Program.

She also was named as the 2007 NAIDOC Youth of the Year and NT's Young Australian of the Year for 2008, for her long-time academic achievement, athletic prowess and mentoring of Indigenous students.

○

**LEFT**  
Bachelor of Pharmacy student and outstanding hockey player Simone Liddy.

## Students return from New Orleans committed to action

Students Maria Kambouris and Kevin Kadirgamar have returned from the Clinton Global Initiative (CGI) meeting in New Orleans, inspired to make a difference in their community.

More than 600 students from 15 countries on six continents attended the inaugural meeting of CGI at Tulane University to discuss how they would change the world.

Students discussed actions to address climate change, global health, human rights and peace, and poverty alleviation.

On the final day of the forum, students were given shovels and helped former US President Bill Clinton and actor Brad Pitt to clean up an area to provide new housing for people left homeless by Hurricane Katrina.

Maria and Kevin were two of only 20 students from across the globe who were funded by the Talloires Network to attend the CGI meeting. CDU joined the Talloires Network in 2006.

A recent graduate of the Bachelor of Social Work, Maria Kambouris said that having the opportunity to voice her opinions along with others committed to making a difference was an empowering experience.

"Having the opportunity to meet and network with other Talloires students from around the world gave me a broader perspective and understanding on world issues and actions being taken to promote positive change," she said.

Second year Business/Law student, Kevin Kadirgamar said that being with a lot of people committed to social change in their communities was the most inspiring aspect of the visit.

○

**LEFT**  
CDU students Maria Kambouris and Kevin Kadirgamar with some of the 600 students attending the Clinton Global Initiative.

**RIGHT**  
Former US President Bill Clinton and actor Brad Pitt put their words into action.





first  
person

## Lessons for NT in study of India's poor

Research among indigenous peoples of east India has parallels with struggles of Indigenous Territorians, says CDU Associate Researcher Nick McTurk.

The Scotsman joined Charles Darwin University early in June 2007 to study poor educational outcomes among the NT's Indigenous communities.

As a student at the University of Dundee in Scotland, he completed a PhD on child mortality and ameliorative policies in the east Indian state of Orissa.

It took him seven years and included two extensive trips to the state, but Dr McTurk gained detailed insight into some of India's most vulnerable communities where infant and child mortality rates are only surpassed by those in parts of sub-Saharan Africa.

Dr McTurk clearly remembers his first steps on Indian soil and said Orissa's magnificent temples and picturesque scenery formed a stark contrast to glaring social inequities and crushing poverty.

"As a Westerner, you initially see complete chaos and disorganisation but after a few weeks realise that Indian people are bound by their social status and seem to know where they stand in the world," he said.

He said distance from healthcare facilities and insufficient awareness

of and uptake of healthcare among indigenous and other disenfranchised groups created a huge demographic disadvantage for many local people.

"Cultural power structures are crucially important and women's self-help groups are pivotal," he said.

His findings and experiences are mirrored in remote Indigenous communities in the Northern Territory of Australia, where disparity in the uptake of education and health services partially explain the high burdens of morbidity and low levels of life expectancy for these social groups.

"Separating the cultural and historical differences of both countries, you have gatekeepers as such, those who are connected or articulate enough to engage the services of NGOs or government."

He cited the use of mobile pre-schools in NT communities only where there was strong local support.

"It is a contradiction to have communities that don't value health and education services missing out on these crucial resources and support," he said.

"This is an example of where social policy is confounded by this automatic disparity."

Dr McTurk suggested patterns of educational discrimination in developing nations gave a valuable insight into the issues facing regional Indigenous Australians.

"The apparently disparate contexts of the NT and Orissa share important similarities and as a developed nation, much can be learned from studying these deprived groups," he said.

#### TEXT

Jason McIntosh

#### PHOTOGRAPHS

Courtesy Nick McTurk

The social and cultural costs of imperialism and colonisation were also shared between indigenous peoples of both countries.

“It’s easy to assume Australia’s problems are unique, but there are many examples from across the world where peoples have struggled to adapt to this new world order,” he said.

“We need to look at educational challenges from a global perspective.”

And while endemic corruption plagues educational reform in many developing countries, he said power structures behind education needed to change if there were to be improvements in its delivery.

“Once again, in both countries key variations in education, morbidity and malnourishment between ethnic groups were obvious because of these social inequalities,” he said.

“I feel pride that my role mapping and modelling these patterns is giving other educators and experts a foundation to help close that gap here in Australia.”

And this means challenging traditional education models.

Dr McTurk is part of a team exploring the expanded deployment of mobile pre-schools by the Northern Territory Government, a strategy he said was suited to the transient nature of many Indigenous people in remote Australia.

“Any concept that gives Indigenous youngsters more schooling and a better chance of life needs to be explored and I feel very fortunate to do this,” he said.



## Long road to NT

Nick McTurk hails from Kilmarnock, a small town in south-west Scotland and the home of Johnny Walker Scotch Whisky.

Excelling in subjects that connect people and science, he was accepted into undergraduate studies in geography at the University of Glasgow where the interaction between demography and the physical environment was a key focus.

His interests in exploration, maps and the outdoors led him to conduct post-graduate studies in surveying and he soon crossed into a career as a land surveyor in a broad range of contexts throughout the British Isles.

After seven years, though, Nick wanted a new career direction where his skills would deliver more direct benefit to the lives of others.

“While I did enjoy the challenge of the work, I felt compelled to make more of a social contribution to the world. While it was a big step, I felt I needed the change,” he said.

His decision was seeded by a trip to India in 2001 where he noticed local media articles reporting an alarming

growth in the demographic disparity between men and women.

“It was clear women were at a significant disadvantage in society and I wanted to find out more about what was behind this gender imbalance,” he said.

Fresh from his travels and armed with quantitative skills gained in surveying, he approached a former lecturer, Professor Allan Findlay, who had relocated to the University of Dundee, a major centre for population research in the UK.

Professor Findlay promptly offered Nick the opportunity to conduct PhD research on infant and child mortality in India. His career was now heading in a radically new direction.

“It was a huge change for me moving from a world of civil engineering to conducting research concerning gender-selective infanticide, endemic discrimination and immense poverty, but I realised my quantitative skills

and spatial awareness were great tools to interpret variations in these issues between social groups and across the country,” he said.

Nick said the research opened his eyes to the critical role education played in health outcomes.

“I observed huge inequity in the application of policies designed to improve developmental outcomes and was shocked to see rampant discrimination against indigenous people,” he said.

Nick said he found his research rewarding and after submitting his thesis in 2007 wanted to further his contribution to indigenous health and educational outcomes.

He applied for a position exploring Indigenous school readiness at CDU’s School for Social and Policy Research and, in mid-2007, relocated to Darwin.





## Charles, My Hero

### Defence chaplaincy – an evolving reality



Australian Defence chaplaincy is an evolving engagement of theological paradigms in the secular and public sector. While the nation's ecclesiastical institutions weave their downward spiral into spiritual redundancy, through a disconnected religiosity that has lost contact with the spiritual angst embedded in a post-industrial world, a variety of chaplaincy models continues to emerge with renewed vigour into the secular institutions.

Defence chaplaincy is a uniquely embedded ministry within a public sector not known for its religious identity. Despite the Australian Defence Force providing some of the most significant spiritual engagements which cause the nation to pause and ponder its social meaning, soldiers are not acknowledged generally for their religious being. Yet in the midst of humanity's self-inflicted inhumanity to itself, the ultimate questions of being emerge and find meaning. In the trenches of battlefields, both past and present, war uncovers that search for meaning which lies dormant deep within all. For 95 years chaplains have served Australian Defence personnel in moments of death, tragedy, loss, and anguish, making them perhaps the longest embedded ministry any ecclesiastical institution can lay claim to within Australia. In those years it has evolved and adapted to the changing landscape of war, peace, and a variety of other military operations around the world.

Just as Australia is an evolving social entity in a changing global landscape, Defence chaplaincy is also an evolving engagement of the spiritual dimensions of life. It is apparent that deep within the social psyche of Australia, there exists a deep sense of angst as the nation searches for meaning in an ever-increasing meaningless world. Chaplains have to forge a way forward in the midst of this search for meaning. The move of some ecclesiastical institutions to

adopt the globalised cosmopolitanism of individualism and generic redundancy in meaning, and the counter movement of fundamentalism that works from assumptions of truth and the need to advocate for them without needing to define them, must be rejected by chaplains who desire to aid the search for meaning within the lived out context of the soldier's life. Evidence from other forms of chaplaincy, such as those within the medical world, clearly affirms this need for chaplains to do the hard work of aligning theological truth with lived out experience that attempts to make sense and empower the soldier to find meaning in what is too often a meaningless use of force on the world stage. Where individuals are able to make sense of the spiritual quest being wrestled out deep within their being, they are able to cope with the tragedies and struggles of life and man's hostile inhumanity. Studies of prisoners of war out of Korea affirm similar studies being done out of Scotland's hospital system of the fundamental worth of chaplains embedded within the modern secular institution.

As Australia's national identity continues to evolve, its public institutions continue to change to meet the norms and expectations of the nation. Integral to this, in terms of Defence's capability and empowerment to meet these public expectations is the presence of chaplains. Their struggle in this evolving reality is to correlate their theology with the experiential realities of those whom they serve. Such a challenge is one still being realised and worked out within the context of such ministry.

o



#### ABOVE

Reverend David Grulke  
Chaplain – Army (Lutheran  
Church of Australia).

#### TEXT

Reverend David Grulke

#### PHOTOGRAPHS

Courtesy Australian Army



## One bright spark

Andrew Macrides was born, raised and educated in Darwin. Now he heads one of the Territory's largest businesses with turnover exceeding \$500 million a year.

**TEXT**  
Richie Hodgson

**ABOVE**  
CDU graduate Andrew Macrides heads one of the Territory's iconic companies.

**PHOTOGRAPH**  
Courtesy Power and Water

Andrew Macrides is into his second year as Managing Director of the Power and Water Corporation, the Northern Territory's premier provider of electricity, water and technological services to more than 80,000 customers.

At 48, the CDU accounting graduate and father of four has achieved pretty much everything he's set out to, and points to his local roots as the catalyst for his success.

Andrew grew up in Darwin in the '60s and '70s when it was still a frontier town and its reaches ended at Nightcliff. His grandparents had emigrated from Greece at the turn of the century and settled in Darwin.

Education was high on his parent's agenda and he became the first in his family to attend university. Refreshingly, Andrew considers himself "one of the lucky ones" who chose to forgo offers from southern states and remain in Darwin.

"I'm proudly locally born, raised and educated and I've been able to advance my career by staying right here in Darwin with my family," he said.

"As an accountant in Darwin, advancing my career hasn't meant that I've had to sit in a back room with my face glued to a monitor. It's more a case of endless opportunities, experience and diversity of work."

Graduating with a Diploma of Business, a Bachelor of Business, and a Master of Business Administration from CDU's predecessor institutions,

Andrew began his career as an accountant in the private sector. He moved to the public sector, first in financial accounting and general management roles in the Australian Government, before moving to the NT Government in 1996 when he became General Manager of Corporate Services with the Tourist Commission.

Andrew points to the operations review of the Territory's electricity industry in the late '90s as a major milestone in his career. "I was lucky enough to be a member of the review team of the then Power and Water Authority. The review ended up in structural changes to the makeup of the electricity industry in the NT and the rebranded Power and Water became a government-owned corporation. I stayed on after the review to help implement the changes and was appointed to the position of Chief Financial Officer."

Fortified by Power and Water's belief in his ability to drive positive change across the organisation, Andrew assumed the role of General Manager of Business Services and Company Secretary before being appointed Managing Director in February 2007.

As the Managing Director of any major private sector organisation, Andrew oversees Power and Water's day-to-day operations, and decides and implements its strategic directions. Major items on his plate include Power and Water's five-year, billion dollar asset improvement program focused on accommodating and improving services for an ever increasing population, and the Commonwealth Government's Green Paper on Emission Trading.

It's a pretty big agenda, but the former Darwin schoolboy, who is the first non-engineer to head the company, is obviously equal to the task. He talks enthusiastically about his role as Power and Water's chief visionary and about the opportunities in our own backyard.

"The Territory is very near and dear to my heart and Power and Water is one of the Top End's most iconic companies. We've managed to instill more of a customer focus in our operations and the challenge is always ensuring our customers are happy," he said.

"You can make a successful career in Darwin and you can go on to great things graduating from CDU. Just look at me."





## Research targets crop failure

Feeding the world's population is one of the most pressing challenges facing the global community. Lucy Tran-Nguyen's research into a plant pathogen may help to shore up food supplies by protecting crops against failure.

As climate change and high fuel costs force up the price of food around the world, research at Charles Darwin University could help to protect against crop failure.

Dr Lucy Tran-Nguyen spent the four years of her PhD candidature investigating bacteria in a bid to help farmers reduce incidents of crop failure.

A plant pathogen named *Candidatus Phytoplasma australiense* is commonly found in Australia and infects high cash crops such as papaya, pumpkin and strawberries.

It is believed that identifying the DNA sequence of this plant pathogen will not only help to reduce crop failures, but also will mean fresh produce remains affordable for Australian consumers.

Her PhD, undertaken through CDU, focused on sequencing the genome of *Candidatus Phytoplasma australiense*, which she found possessed a comparatively large number of transporter genes to that of other plant pathogens. These genes allow the pathogen to transport certain nutrients directly from their host in order to survive as an obligate bacterium.

The genome also contained some mobile DNA units which were of great interest.

While genomic mobile units are a common feature in pathogens, they can contain different kinds of genes such as those that cause disease.

Mobile units can move in and out of a genome and affect genes surrounding the unit.

Human pathogenic bacteria are also known to carry mobile units.

And although relatively few plant pathogen genomes have been sequenced compared with human pathogens, similar genomic features such as the presence of mobile units, can provide some information on what happens to the genome during evolution, and could contribute to future research about the genetic makeup of pathogens present in human diseases.

Dr Tran-Nguyen's four years of research, however, were not without setbacks. On two occasions, her experimental plants died, delaying her experiment by 12 months before she had even begun.

Not only did she have to deal with the disappointment of two failed crops, Dr Tran-Nguyen also was unable to begin work until she had viable samples of the pathogen.

Unfortunately, the particular strain of bacteria she was studying couldn't be cultured in the laboratory and had to be grown under natural conditions.

About 100 periwinkle plants were required to produce sufficient quantities of bacterial DNA for the experiment.

It took three months to grow healthy, well-established specimens before Dr Tran-Nguyen could set about deliberately infecting them with the pathogen. And after infection, the initial symptoms took one to two months to show, and at least three months for the entire plant to exhibit symptoms of the disease.

The whole plant had to be thoroughly infected before work could begin on extracting the bacterial DNA from the leaves, as each host plant yielded only one per cent of bacterial DNA.

Along with quantity constraints, ensuring the DNA was sufficiently pure was a major challenge also.

### TEXT

Raquel Dubois

### ABOVE

Lucy Tran-Nguyen

### PHOTOGRAPH

Raquel Dubois

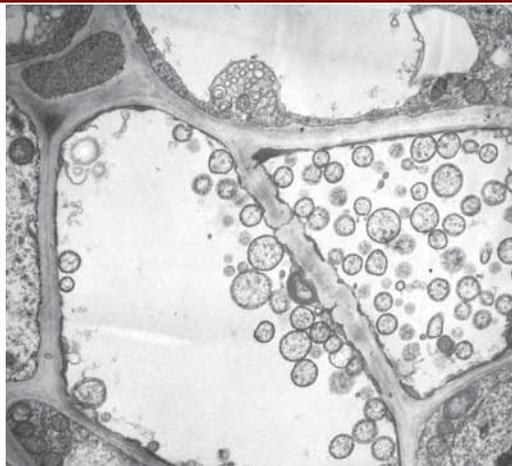
### WEB BYTE

Visit the *Journal of Bacteriology*: [jb.asm.org](http://jb.asm.org)



**ABOVE LEFT**  
Strawberry plant specimen.

**ABOVE CENTRE**  
Phytoplasma australiense in phloem (food conducting vessels) of a strawberry plant.



**ABOVE RIGHT**  
Blue specks along the length of the phloem vessel indicate Phytoplasma DNA.

**PHOTOGRAPHS**  
Courtesy of Karen Gibb, Don Gowanlock, Don Hutton



## Tortuous journey to safety in NT

Lucy Tran-Nguyen learnt early in life about overcoming adversity.

She and her family escaped communist Vietnam in 1980 with 189 others aboard a 16-metre boat. She was just five years old.

During the journey in the cramped conditions, the passengers remained below deck for 23 hours a day, endured foul weather and cyclones, and were attacked by pirates.

And a few metres off the coast of Malaysia, the boat capsised.

Dr Tran-Nguyen recalled the terrible conditions of the Malaysian refugee camp, where the family had to supplement its meagre rations by buying food from visiting food vendors.

She remembered how her mother sold jewellery that she had hidden from the Thai pirates to buy meat to celebrate her daughter's sixth birthday.

On May 1, 1980, the family received word that their grim circumstances were about to change with the Uniting Church sponsoring them to immigrate to Darwin.

Though both her parents were university-educated (her father in economics and law, and her mother in accountancy), they took whatever jobs were available to support their three children in their new lives.

Now her life is complete in the Northern Territory, Dr Tran-Nguyen married an Australian and recently started work with the Department of Primary Industry, Fisheries and Mines in Darwin.

To make matters worse, Dr Tran-Nguyen's funding was running out, with the permitted time to complete her PhD reduced from five years to four.

Then came the biggest threat to her project: news that a New Zealand researcher was working on a similar project for her PhD.

And so it became a race to the finish to be the first person to publish their research.

Dr Tran-Nguyen's supervisor, Associate Dean of Research and Postgraduate Studies in the Faculty of Education, Health and Science, Professor Karen Gibb, reeled in collaborators from Germany to help produce and infect the plants more quickly so that a genomic library of the plant pathogen could be constructed.

The actual bioinformatic research had to be undertaken by Dr Tran-Nguyen alone, otherwise it would compromise the authorship of her PhD.

The process of bioinformatic analysis was initially estimated to take about 18 months but that was feared to be too long, given the race to sequence the genome.

Dr Tran-Nguyen completed the research in just more than a year, and because she had help in some of the earlier stages, she was still in the running for getting her research published before her counterpart in New Zealand.

To sequence the genome, however, she had to find an answer to the question of how this particular plant pathogen survived and, in fact, thrived.

What Dr Tran-Nguyen found was that through evolution, some of the pathogen's genes related to feeding became redundant, with obligate pathways being eliminated. The bacteria had evolved to survive in the area of the host by feeding on nutrients directly from the plant phloem instead of relying on its own genetic structure for the feeding function.

This led her to consider: "What is the minimum number of genes a bacterium needs to survive?"

By this stage, Dr Tran-Nguyen had forgotten all about the race to publish, and was concentrating on producing a high-quality, technical PhD.

The main component of her thesis was pre-published online in the *Journal of Bacteriology* in March 2008.

Difficulties in getting funding for further research into plant diseases means that Dr Tran-Nguyen's research has not been exploited to its full potential. Her data, which could be used to determine how pathogens actually cause diseases in plants is being sidelined in favour of the current Australia-wide trend to direct scientific funding into human pathogenic research. She said the irony was that her examination of the mobile units present in plant DNA could provide valuable information about human pathogens, helping researchers determine what role mobile units play in the disease cycle for all living things.

○

○



## ***New e-tool bridges cultural gap***

Low literacy levels exclude many Indigenous people from gaining post-school qualifications, but Chris Tayler's innovative approach to vocational education is bypassing the barrier with the help of a new e-tool.

When it comes to education across cultural groups, one size does not fit all. Vocational education and training lecturer, Chris Tayler knows too well that the mainstream approach to teaching vocational courses often relies on English language, text-based resources which are inappropriate for many Indigenous people.

#### **TEXT**

*Robyn McDougall*

The consequences of poor literacy levels within indigenous populations are multifarious. Self-esteem, self-respect and confidence are among the first casualties when work and life prospects are limited or non-existent.

#### **ABOVE**

*Early Child Care lecturer Chris Tayler's new teaching technique appeals to the strengths of Indigenous people.*

#### **PHOTOGRAPH**

*Raquel Dubois*

Now, Early Child Care lecturer Ms Tayler has developed an electronic learning tool that appeals directly to the learning styles of Indigenous people. It's visually oriented, has a large component of story-telling and draws on family and community. And it's also helping to equip young women to enter the childcare industry.

"Research has shown that for many Indigenous learners, mainstream education systems don't use teaching processes that appeal to their strengths," Ms Tayler said.

"E-learning approaches to teaching and assessment introduce greater flexibility to the learning environment and are more inclusive of students who cannot engage with mainstream approaches."

She has just completed the first semester-long trial of DIDG Childcare, an e-tool which uses video technology for both teaching and assessment.

DIDG Childcare, named by the students to reflect the digital nature of the tool, aims to raise a new generation of Indigenous childcare workers to work in communities and beyond. The program comprises a database of digital film clips with written explanations and relevant stories about childcare from their own communities. Students use laptop computers to access the video clips which demonstrate the course competencies. They also have small touch screen digital cameras to record themselves for assessment as a means of providing evidence of their competency and achievements.

Once students feel they are ready to be assessed, they have the option of recording themselves as an audio explanation or give an interview on the given performance criteria.

Research has shown that for many Indigenous learners, mainstream education systems don't use teaching processes that appeal to their strengths.

"The Indigenous students respond better to film clips showing Indigenous interviewees or demonstrators and to working as a group to discuss the content of the clips, including discussions about their own cultural and community context," Ms Tayler said.

"Essentially, DIDG Childcare is an electronic tool box for students.

"Students are able to work at their own pace. The design enables them to take as much time as necessary to consolidate their understanding of the unit content by watching and re-watching clips and listening to audio as often as needed.

"The clips also provide a means of combating absenteeism and increase the potential for academic success because it provides a consistency to the teaching and learning process. No student misses out. They always have access to the video clips when and as often as they need them."

The e-tool was developed as part of the Indigenous Training and Development Project, which is funded by the Red Cross (Northern Territory) Communities for Children Program. The aim is to increase the number of young Indigenous people holding a Certificate III in Children's Services and to increase their career options.

But another dividend of the program is that it is helping to create Indigenous-appropriate services for children.

"Most childcare centres have policies which address cultural inclusion and appropriateness. Having Indigenous people working at the centres will give voice to such policies. Where cultural knowledge and appropriate practice are embedded into the daily provision of care and play experiences, everybody benefits," Ms Tayler said.

The first stage of the training project has just finished at Palmerston's Outside Hours School Care and the signs of success are strong.

"In a cohort of 15 students, two students have begun part and full-time work, another three are in traineeships in the industry," she said.

"Overall, the 10 remaining students (five have withdrawn) have all successfully achieved nine units of the 14 comprising the Certificate III in Children's Services."

It's an encouraging outcome after just one semester of delivery.

One of the great advantages of the program is that it does not depend on the Internet for delivery, making it suitable for remote and regional locations.

But Ms Tayler is not suggesting that the e-tool is a cure-all for Indigenous vocational learning. "As the implementation of electronic databases are for the most part new to VET education within the childcare industry, there are features of the program that require improvements," she said.

"While the responses to the training have generally been positive and there are some good employment and training outcomes emerging, student retention is an issue of some concern.

"And because this is a new way of learning for many, a high degree of support and mentoring is required to make the training work.

"Currently there is a paucity of research that illuminates the distinct differences between the learning style of Indigenous and non-Indigenous students, which would justify the need to develop more appropriate methods of teaching. This effectively means that individual teachers must take it upon themselves to bridge the gap to enable Indigenous learners to succeed in mainstream education," she said.

But some unanticipated benefits also are flowing for the women who are taking part, many of whom are young mothers.

Ms Tayler said she has seen evidence that the course is helping the students to better care for their own children.

"This indirect outcome of the project has seen the students apply the knowledge they are gaining to benefit their own parenting skills."



#### ANTENNAE

This article is based on a paper written by Chris Tayler which she will present to the World Indigenous People's Conference – Education in Melbourne in December.



## **Top End research backs our gold medal push**

Research by sports scientist Matthew Brearley is helping Australia's elite athletes reach their potential under extreme conditions.

### TEXT

Richie Hodgson

### PHOTOGRAPH

Courtesy Football Federation Australia

### ABOVE

Dr Matthew Brearley undertakes hydration testing with the Olyroos in June 2008.

Northern Territory sports scientist, Dr Matthew Brearley's research into athletic performance in the tropics is proving invaluable to Australia's premier and Olympic athletes.

Australia's obsession with gold medals, world records and sporting glory means our athletes are continually pushing themselves to their limits like never before. And with Darwin's extreme conditions attracting some of the world's finest athletes, it's game on!

A true love of sport and a burning desire to help Australian athletes push the boundaries of performance inspired Dr Brearley to undertake a PhD at CDU, which was awarded recently. He investigated thermal physiology, an area of national sporting interest, and continues to advise the Australian Olympic Committee regarding heat-related issues.

As the National Heat Training and Acclimatisation Centre's performance-enhancement services manager, Dr Brearley travelled to Beijing in August 2007 to implement a series of monitoring and cooling strategies with the Australian men's and women's hockey teams as a part of an Olympic test event.

“For our Olympic athletes to be a force in Beijing, the challenge was always that they needed to be able to perform at their best in difficult conditions,” he said.

With August temperatures in Beijing generally above the 30 degree mark and humidity around 50 per cent, the combination of factors equates to a heat stress index above 100 per cent. In these conditions, an athlete's sweat is not enough to control their body temperature.

Dr Brearley's latest research is one of the most comprehensive studies of athletes' responses to high-intensity activity in tropical conditions and the development of pre-cooling procedures.

By identifying the physiological and perceptual strain endured by athletes competing in hot conditions, and developing cooling strategies, Dr Brearley's research sought to maximise athletic performance in some of the most trying conditions. These studies were the first to use NASA-developed ingestible core temperature sensors to assess the responses of athletes competing in the tropics.

The findings from the four-year study demonstrated that athletes endured high levels of physiological and perceptual strain when competing in tropical conditions and that pre-cooling in water reduced subsequent strain and might enhance athletic performance.

“In the tropics you don't need much of a warm-up. It doesn't take much to take a body up to temperature because of the environment being so warm,” he said.

During the acclimatisation process, the athlete's internal temperatures climb. They sweat profusely and lose large quantities of salt in their sweat. As the days pass, they sweat even more, their salt loss diminishes, skin and internal temperatures drop and endurance improves.

“There are a couple of aspects to acclimatisation,” Dr Brearley said. “There's the physiological and then there's more of a psychological, I guess you could say mental, aspect.

“With the physiological, you can confer pretty much all acclimatisation benefits in up to 14 days. During that time they store heat that they wouldn't normally store in their local environment, and that basically switches on sweating and dealing with the entire body temperature.”

After seven days of training, the body is sweating near full capacity. It begins sweating at a lower core temperature and allows an athlete to exercise longer before they begin to overheat. The psychological aspect, the willingness to continue working through intense heat, is more complex and often takes longer to achieve depending on the athlete.

The Darwin born and bred researcher said he believed that as athletes reached the boundaries of individual excellence, the role of sports scientists would evolve and even more emphasis would be placed on getting athletes to go harder and faster for longer.

“Every Australian national team has its own dedicated team of sports scientists and the demand for sports-based scientific knowledge preparation has never been greater.”

Much to his delight, Dr Brearley's research has taken him out of the laboratory and into the field to assess thermal strain on local and visiting athletes in sports such as rugby union, hockey, motorsport, cricket and football. Most recently he conducted a series of hydration test events with the Australian under-23 national soccer team during a trip to Darwin in June 2008.

Dr Brearley pointed to his love of all sports and the challenge to gain a scientific understanding of what an athlete experiences in competition as the motivations underpinning his work.

“Ideally, we can develop practical and individualised method-based strategies that maximise athletic performance in a variety of conditions. The nature of my work means that I'm very much behind the scenes but the end result is the most important thing. Knowing that I may have in some small way contributed to an athlete's personal best or world record is satisfaction enough for me,” he said.

○



**ABOVE LEFT**  
Dr Brearley puts NTIS athlete Jack Benson through his paces.

**PHOTOGRAPH**  
Richie Hodgson

**ABOVE RIGHT**  
Darwin's harsh sporting conditions make it a destination of choice for some of the world's best athletes.

**PHOTOGRAPH**  
Courtesy Football Federation Australia

#### WEB BYTE

For more information on the NT Institute of Sport, visit [www.ntis.nt.gov.au](http://www.ntis.nt.gov.au).



ABOVE  
Azlam Azad

## Biosecurity defence may begin in mangroves



With biosecurity becoming an increasingly high priority, new research into mangrove ecology may inform future environmental defence policies.

International PhD candidate at Charles Darwin University, Azlan Jayasilan A. Gulam Azad said that concerns about migratory birds spreading avian influenza meant governments would need information about bird populations in coastal mangroves to develop their first defence.

TEXT  
Raquel Dubois

Malaysian-born Azlan is in the early stages of researching bird populations in 13 mangrove sites in and around Darwin, the largest being Charles Darwin National Park, and the smallest at Mindil Beach.

He said he hoped to discover whether the species composition of birds in mangroves was distinct from the outlying environments.

He said that as well as indirectly informing biodefence policies, his research would help policy-makers to understand the impact of habitat destruction, and provide useful information for fishing and environmental coastal protection.

Before starting his PhD at CDU 12 months ago, Azlan was examining the impact of tiger-human conflict in Malaysia.

Now he hopes to prevent human impact on the environment.

“In Malaysia, Federal and State government policies concerning land conservation are often diametrically opposed,” Azlan said.

“While the (Malaysian) Federal Government is responsible for setting environmental protection laws, the State Government has authority over land use. So even though the Federal Government has a policy of land conservation, it has no specific powers to enforce it if the State wishes to develop a particular area,” he said.

Australia is similarly facing land development conflicts, with mangrove areas in Darwin being earmarked for future development. While many people understand the benefits of land conservation with regard to negating the effects of greenhouse gas emissions, few researchers have looked at the impact of industrialisation on mangrove ecology specifically.

“Prior to the tsunami in 2004, it was difficult to justify the presence of mangroves in coastal areas of South-East Asia, but since then, more people have become aware of their importance and how their presence can help to mitigate the effects of natural disasters,” Azlan said.

“Likewise, Darwin’s urban areas fringed by mangroves probably sustained less damage by Cyclone Tracy than other areas.”

Azlan is also investigating whether vegetation has a direct impact on bird species composition and abundance, and is recording available food resources such as insects and nectar at each mangrove site in an effort to determine whether resource density can be linked directly to these populations.

“I’d also like to find out if the presence of a particular species of bird informs us about the type and condition of mangroves,” he said.

Azlan said few people were documenting fauna in mangroves, probably because of the mosquitoes and mud – not to mention the occasional crocodile!

He said he hoped, however, to demonstrate that birds had a strong relationship with mangrove areas, and encouraged governments to protect mangrove bionetworks.

“I expect the research will confirm that surrounding environments contribute to bird species variation and population composition, though I’m hoping to identify a flagship bird species to help highlight the need for mangrove conservation in Darwin and eventually in Malaysia, too.”



PHOTOGRAPHS  
Courtesy Azlan Azad

# Piecing together Daly's puzzle

Computer modelling is helping Eric Valentine and his research team to understand some of the secrets of the Territory's Daly River.

TEXT  
Penny Baxter

The Daly River has seduced a leading hydraulic engineer to its relatively untouched shores in the Northern Territory.

Like a living puzzle, the river gives researchers a chance to uncover solutions to the river's changing water flow and the origin of sediment that moves down its riverbed.

Charles Darwin University's Foundation Chair of Civil Engineering, Professor Eric Valentine is developing a method of hydrodynamic computer modelling to recreate the elements affecting the water flowing along a 300km section of the Daly River, south of Darwin.

Professor Valentine has studied some of the most interesting rivers in the world – the Rakaia in New Zealand, Tyne in England and Shabelle in Somalia, but he believes the Daly River could provide the key to unlocking the secrets of understanding river stability.

"The Daly River is the best opportunity to test river geometry theories that I have seen anywhere in the world because it is relatively untouched," he said.

Professor Valentine is part of a team of hydrologists and earth scientists from the Australia-wide Tropical Rivers and Coastal Knowledge (TRaCK) research body which is developing ways of measuring water quality to create better methods of managing our waterways.

Using complex computer software and numerical models to recreate the riverbed and water flow, Professor



ABOVE Daly River PHOTOGRAPH Courtesy Eric Valentine

Valentine will track sediment behaviour in the Daly River: where it comes from, what it does once it enters the river system and where it ends up.

The team gathers information from sediment testing at three 10km river sections and uses an acoustic Doppler device to measure the velocity of gravel and sand flowing down river. Cross-sections of the river bed, satellite photography and topographical maps are combined to create a two-dimensional computer model of the river.

A set of equations recreates the river channel as a numerical model so various elements can be altered, such as sediment measurements, to mirror or predict changes in the river.

"We believe that at some reaches of the Daly River, the channel has been widening and becoming slightly shallower," Professor Valentine said. "We want to find out if this is actually happening, why it is happening, and ultimately find out if it has anything to do with clearing the land, or if it is hydrologically based."

Professor Valentine and his team also use hydrodynamic computer modelling to map sewage outfalls in Darwin Harbour to advise on policy changes for the Northern Territory Government and Power and Water.

Their innovative research into what sediment and nutrients enter the uniquely warm, tropical waters of the harbour is vital to discovering solutions for how to treat wastewater and restrict outfalls.

The dedicated professor is convinced that to save water for the future, Territorians need to know what is happening to existing water resources, not just the water consumed but the quality of water gushing down the riverbeds and swirling around Darwin's precious harbour.

By tapping into the expertise of more than 70 researchers involved in TRaCK, which is hosted at CDU, Professor Valentine said a key solution to solving future water issues in the Territory was attracting people with the skills and knowledge to help.

"There is no shortage of things to do and ideas to pursue. The shortage we have in the Northern Territory is the people to do it," he said. "There are a number of problems and what I am trying to do is to create an increased capacity to work on these issues for the future."



ABOVE  
Eric Valentine

PHOTOGRAPH  
Raquel Dubois

#### WEB BYTE

For more information about the Tropical Rivers and Coastal Knowledge (TRaCK) research body, go to [www.track.gov.au](http://www.track.gov.au).



## *Sowing the seeds of confidence*

Training is at the heart of a program that is helping Central Australian Aboriginal men to beat alcohol addiction and gain self-esteem.

**TEXT**  
Jason McIntosh

They're Aboriginal men recovering from alcohol and drug addiction, but forget the stereotypes. You're not likely to find them in this shed.

I'm hanging out with these men who are hammering, sculpturing and sawing busily in a woodworking shed of the Charles Darwin University's Alice Springs Art facility.

They are clients of the Central Australian Aboriginal Alcohol Programme Unit (CAAAPU).

For the past 18 years, a little known but successful program has seen hundreds of men put their hands to work and gradually gain the confidence that most of us take for granted.

Their motto is "Beating the grog" and CAAAPU has worked with CDU for more than five years to help Aboriginal people beat their addiction and regain dignity and pride.

It hosts around 20 Indigenous men who live on site at the Alice Springs-based hostel. Most are from outlining communities with the remainder from town.

Many are first-time offenders sent to CAAAPU by the courts eager to divert them from a pathway of crime and jail.

Their recovery involves a two-pronged approach, combining detoxification with skills development including art, computing and health courses.

Wrapped around this is a positive 'can do' environment where great efforts are made to maintain and value traditional culture.

Today, I'm here to see these men in action and find out why this course is integral to their rehabilitation.

When I arrive, I see a few blokes milling around outside the shed 'fence', but most are focussed on their emerging works of art.

I glance over to see ashtrays, lunch boxes, boomerangs and what looks like a stool in progress.

A few look up to see the stranger with a camera, me, and it's at this point that I see how long their welcome mat is.

A bloke in the corner, Kendrick Oliver, gives me a big grin, and I wander over to find him painting his ashtray in beloved AFL Geelong Cats colours. The mat is long.

I offer to take a picture or 10, and he's chuffed. He continues to work with the wood and I swamp him to take a pile of shots.

Judging by his concentration and attention to detail, he is a big fan of the Cats. We talk footy for a while, and Gary Ablett, Geelong Football Club's true super-hero comes up in conversation.

I turn my attention to another bloke, Patrick Long, complete with CAAAPU t-shirt emblazoned with their motto "Beating the grog", who is chiselling away at wood in the vice.

He takes to me like a duck to water, complete with beaming smile as he hammers the chisel deep into the wood.

With a face resembling that of a kid with a new toy, Patrick is full of energy as he squeezes every second out of his time at the shop.

Two down. I repeat the process with two other men, Braedon and Ricky Nelson who are making robust lunchboxes.

**ABOVE**  
Braedon Nelson (left) and Kendrick Oliver get down to work in CDU's Art facility.

**PHOTOGRAPHS**  
Jason McIntosh



“Many Aboriginal people want to learn and progress but have little self-esteem and confidence, so building that up is really important.”

They both give me genuine cracker grins that speak volumes about the fun they're having while they learn.

Helping them are CAAAPU activity officer and counsellor Chris Powell and CDU counsellor Keith Skinner, who are busy around the workshop showing the men shortcuts and tips.

I grab Keith and talk about the program and what it aims to achieve. He admits the men vary in skills and enthusiasm, but says that the vast majority want to learn and to progress.

He hits the nail on the head, figuratively speaking, about what can hamper Indigenous learning: “Many Aboriginal people want to learn and progress but have little self-esteem and confidence, so building that up is really important.”

And, he said, he enjoyed the opportunity to work with a group in which the vast majority was willing to learn.

“To know I can help people even by changing little things gives me a real buzz,” he said.

Chris, a four-year veteran with the CAAAPU, goes further to suggest that many of the men have never been congratulated for their efforts.

“Some of the blokes have never had anyone ever tell them what they are doing is really good,” he said.

“It's a great experience when you look at them in the eye and say that because their reaction is raw and honest and shows the void that alcohol often covers,” he said.

CDU Art lecturer Henry Smith explained why the program was successful in giving a confidence boost in many CAAAPU clients.

“It's an ideal environment for them because they come as a group, are free to create whatever they want and the shed is an open format so they don't feel hemmed in like a typical classroom,” he said.

The men take on accredited subjects from CDU's Certificate I in Visual Art and Contemporary Craft and those contributing are given a certificate of progress at the end of their program which can last between one and eight weeks.

But it's clear the real prize is the tangible product these men build with their own hands.

I scamper off to print my new photos and return to open conversation with the men. All are excited to see themselves in action and take the pictures home, again another mark to show their pride and achievement, even on this small scale.

It's now nearly midday and the men finish their work and pile into the CAAAPU minivan.

As they drive off, I'm reminded yet again that self-confidence and self-worth, sorely lacking in so many Indigenous people, is a major roadblock towards their growth and achievement.

From seeing new-found pride of men learning to ride horses in the APY lands of northern South Australia through to hearing the words of Elders and educators at the recent Garma Festival, the value of recognising their culture in this process is paramount.

By rolling out the welcome mat, Kendrick, Patrick, Braedon and Ricky are showing us one of the by-products of empowerment.





## Rare plant preserved for the future

A rare species of plant found only in remote areas of the Northern Territory has been preserved for future generations.

An implementation and recovery plan for *Boronia quadrilata* (*B. quadrilata*) was carried out after researchers discovered the only known populations of the plant had been severely damaged in April 2006 by category 5 cyclone Monica.

The project was a joint collaboration between the Department of Natural Resources, Environment and The Arts (NRETA) and Charles Darwin University (CDU). Northern Land Council, local Traditional Owners and the Top End Native Plant Society were also involved.

*B. quadrilata* was first discovered in the early 1990s by botanist Kym Brennan and was known only from a single population.

#### TEXT

Raquel Dubois

#### ABOVE

Dr Sean Bellairs examines *Boronia quadrilata* propagated from a cutting.

#### PHOTOGRAPH

Raquel Dubois

CDU has propagated 30 plants of the threatened species from cuttings collected with the assistance of the Demed Rangers of north-east Arnhem Land.

Senior Lecturer in Botany and Restoration Ecology at CDU, Dr Sean Bellairs, supervised the propagation research. The cuttings are currently being hardened to a stage where they can be self supporting.

A search for undiscovered populations of *B. quadrilata* was undertaken by Dr David Liddle of NRETA. CDU Bachelor of Science (Honours) student, Ms Sally Jacka and Demed Rangers accompanied him on the search.

Dr Liddle and the search team discovered previously unknown populations of *B. quadrilata* on top of remote sandstone escarpments, greatly increasing the known number of plants.

There was no road access to the areas where the plant grows in sandy soils atop sandstone pillars, so a helicopter was used for transport into the rugged area. Then the search involved camping and climbing over the rocky habitat.

Ms Jacka collected seeds, cuttings and soil samples for propagation research back at CDU, after having received permission from the Traditional Owners of the land.

The first part of the laboratory research was to determine the biological make-up of the seeds.

“It’s important to know about the particulars of its seed biology for conserving and protecting the species,” Dr Bellairs said.

“One key issue to look at is whether the seed needs a stimulus to germinate,” he said. For instance, many Australian plant species require fire as a stimulus for regeneration.”

Only a small quantity of the seeds collected was actually viable, so the number of seeds that could be used for the research was very small.

“Some plants produce decoy seeds to discourage widespread consumption of their seeds as part of a survival strategy, though low seed viability can also occur when plant populations are reduced to a small number of plants, so it is essential we understand and carefully manage those few remaining plants,” Dr Bellairs said.

Tests were carried out to determine whether there were any mechanisms in the seeds preventing the seeds from germinating. Germination responses to potassium nitrate, de-ionized water, smoke water (to simulate fire), and gibberellic acid (a plant hormone), were measured.

For *B. quadrilata*, gibberellic acid produced the greatest effect, suggesting that the seed would produce a hormone response to specific (though undetermined) environmental conditions to begin the germination process.

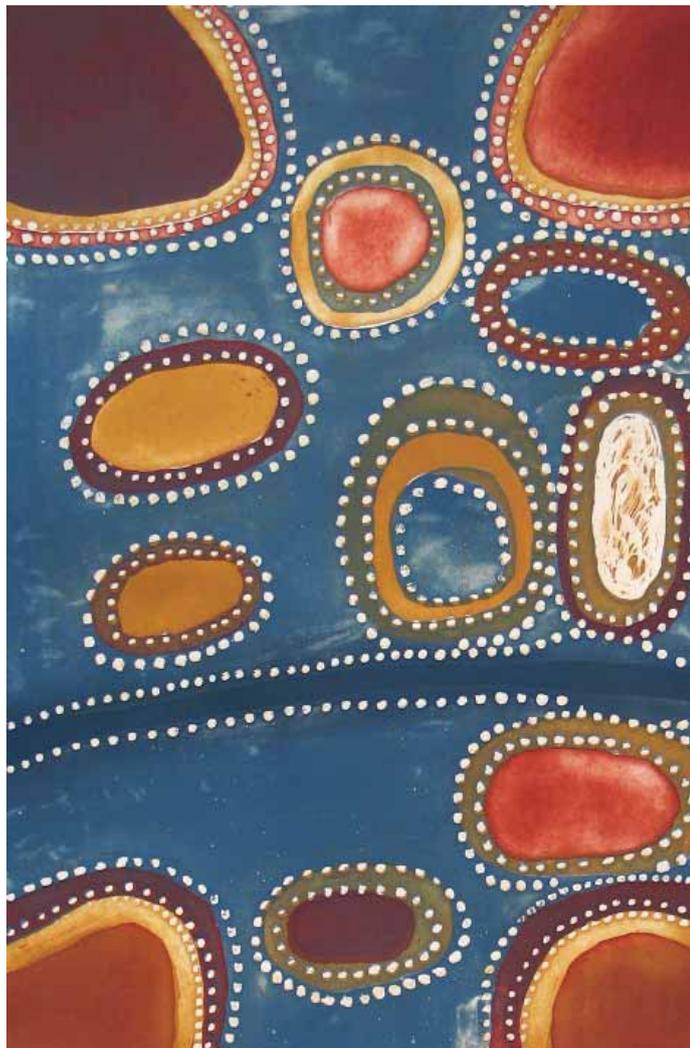
Because of the difficulty in collecting seeds from these rare plants, CDU researchers also investigated how these plants could be grown using tissue culture or plant cuttings.

After several months the plants have reached eight centimetres high, and are in the early stages of developing their own root systems. But they need careful monitoring and watering several times a day to encourage new root growth.

A final report has been submitted to the funding agency, the National Heritage Trust. As a result of this research, it is now known how to propagate *B. quadrilata* and grow plants to supplement remaining populations should they be damaged by disturbances such as cyclone Monica in the future.

○





Minnie Lumai  
*Yab-yab-gnemignim (Sugarbag)* 2008  
 Etching on paper  
 edition of 40

**IMAGE** 50 x 33 cm

**PAPER SIZE** 81 x 61 cm

**PUBLISHER**

Co-published by Northern Editions  
 at Charles Darwin University and  
 Waringarri Aboriginal Arts

**COLLABORATING PRINTER**

Dian Darmansjah, Northern  
 Editions at Charles Darwin  
 University

## LIMITED EDITION

An engaging rendering of line and colour, Minnie Lumai's etching, *Yab-yab-gnemignim*, or *Sugarbag Dreaming*, depicts a Creation story from the Kununurra region. The story, which is central to the Miriwoong and Gadjeriwoong peoples, tells of two kangaroos who fought over the rights to a sugarbag (wild honey) deposit, and which ended with them each throwing a spear that physically came to be their tails.

The kangaroos subsequently agreed to retreat, and the ridge where the sugarbag was hidden became a natural boundary line that segmented

the landscape into two distinct tribal zones, or countries.

Portrayed from an aerial perspective, *Sugarbag Dreaming* shows the physical formations created by the sugarbag being splashed across the ridge, which is depicted by the central circular motifs, while the line running through the lower middle of the etching represents a water course, and an important link between the two groups.

Born in 1940, Minnie is from Miriwoong country in the north-east Kimberley region. She spent her youth at Newry Station, and later moved to Argyle

Homestead with her husband where she worked as a domestic and cooked for the stock camp. Minnie has been based in Kununurra for many years, where she raised her children, and works at Waringarri Aboriginal Arts.

Her etching was created during a printmaking workshop with Northern Editions at the art centre in Kununurra. Four workshops were held over 16 months and culminate in the exhibition *Kimberley Ink* showing from 16 August to 10 October in the Northern Editions gallery.



PHOTOGRAPH Anne Chivas



## Tightening the ties with China

A one-time Territorian and now resident of China, Brendan Worrell couldn't imagine a life better than the one he's living: between two sisters – cities, that is.

**TEXT**  
Robyn McDougall

**PHOTOGRAPHS**  
Courtesy Brendan Worrell

As the Worrell family hurtled across the Nullarbor on Boxing Day 1975 toward a bright new life in Perth, the influences that shape the future man were taking root in the youngest of the four brothers aboard.

Cocooned in the dusty brown Ford Fairlane that blended with its surrounds for much of the trip from Melbourne, young Brendan Worrell relished three days of big mysterious landscapes against a soundtrack of the ABC through the car radio. Vast remote landscapes and the media, already two of his three grand passions were in place.

Fast forward more than 30 years which included a lengthy stopover in Darwin, and Brendan Worrell can be found living on China's southern-most island province of Hainan, working as a journalist and continuing to cultivate large and small relationships with the Top End and West Australia.

The CDU graduate is one of more than 800,000 residents of Hainan's capital, Haikou, coincidentally a Sister City of Darwin and a location Brendan describes as a "bigger Chinese version" of the NT capital.

His interest in China has been slow-burning, sparked by another random childhood experience:

"It dates back to ABC TV which used to run a show, *Monkey*, loosely based on the classic *Journey to the West* (the Chinese mythological novel by Cheng'en Wu).

"This was popular among my brothers. We all wanted to fly on a cloud and beat up demons. Alas, as the youngest, I was usually the demon, getting beaten up."

Years later while he was studying at Charles Darwin University and working in various ways with international students, Brendan developed a deep affection for the Chinese students, in particular.

"I tutored on a weekly basis many Chinese students who imparted, through their character and commitment, some of the essential 'Chinese spirit' which I've increasingly learnt to appreciate and savour," Brendan said.

He followed that fledgling interest and took his first step into the vast communities of Asia while he continued to work toward a Master in Community Development and Management at CDU and edit the student newspaper. Brendan spent a university break as a journalism intern at the *Bangkok Post*, after which there was no turning back. His fate was sealed. "I had ink on my hands," he said.

He didn't know how he was going to do it, but he knew he had to work in Asia, preferably in China, and he had to work in the media. Armed with his new qualification, Brendan moved to China in 2004 and waited patiently for a highly prized position to open at the *China Daily* in Beijing. In the three years between leaving the Top End and finding work in the mainstream media in China, the aspiring journalist took a job teaching at a Chinese university, met and married his wife who is also a teacher, and relocated to Hainan Island, just off the southeast mainland and surrounded by the South China Sea. He could hardly be accused of putting his life on hold while he waited for his break into journalism.



On top of that, Brendan also works as an unofficial ambassador for Haikou / Top End relations.

"I'd love to see more Darwinites getting a taste of what China and Haikou have to offer and, likewise, to get more Chinese and Haikou folk into the Top End for tourism, study or industry purposes," he said.

Brendan regularly welcomes visitors from Darwin to his new home city and supports exchanges in both directions. But the China / Top End links run even closer to home. His wife, Geng Ning Wei, works in the Foreign Affairs Department in Haikou and visits Darwin as part of her work assisting Darwin Sister City visitors.

"There is a dedicated core of decent people in both locations," he said, clearly enthusiastic about the relationship between the cities.

"Haikou is blessed with beaches, coconut trees, frangipanis, parks, cycle ways, lakes and a relaxed, down-to-earth culture.

"It's ideal for young families and there's an unassuming nature among the local population. This means, as in Darwin, you can meet the local mayor or chief minister and talk personally to them – a privilege often denied to citizens in more built-up areas.

"Societal gateways are less fixed and ideas are more readily exchanged. Plus the weather. I love thunderstorms, and the biodiversity the tropics support. The steam as it rises off the hot asphalt, the dragonflies and butterflies and geckos that tongue-slap mosquitoes. In some respects, Haikou is just a bigger Chinese version of Darwin."

Brendan gained a job in journalism in 2007 when he joined the website division of the *China Daily*. There he edits a news service that feeds about 140,000 mobile phone subscribers, he reads audio news for Chinese English language learners, writes a regular column for Chinese English language

learners and anchors the weekly video news. He also writes Op'Ed pieces with a China focus that feature in the *Daily's* website opinion section.

Now he's looking to combine all his interests by establishing an education-oriented business that operates from both Darwin and Haikou. "I intend to set up an agency that facilitates exchange between Haikou and Darwin students, initially, and later expand to the greater China / Australia markets," he said.

Evidence of his private interest in education is confirmed by his Bachelor of Arts (Social Sciences), Post Graduate Diploma (Social Welfare) and Masters (Community Development and Management). And his dedication to setting up a business? That's also evident.

"I have just completed my certification to be a qualified education agent counsellor and have just bought an apartment in Haikou where we plan to relocate and set up shop.

"Hopefully, in the near future, I will buy a home in Darwin and spend the rest of my days traversing back and forth between Darwin and Haikou. It's my goal."

Sounds like a plan...



#### WEB BYTE

View Brendan Worrell's Op'Ed columns for the *China Daily's* website at [www.chinadaily.com.cn/opinion/brendan.html](http://www.chinadaily.com.cn/opinion/brendan.html).

## Disaster's tremours

The Sichuan (earthquake on May 12) disaster was a horrid event that is still being digested. Many colleagues went to report and came back changed people. Old students who came from Sichuan were distraught.

Here in Beijing and within the state media, we were totally absorbed in the response effort and the ongoing relief work.

People pulled together and in-house donations and appeals were conducted.

I think the immensity of the situation where about 70,000 people lost their

lives, over a million made homeless – the death toll was almost the total size of the Darwin population – is really difficult to comprehend.

The human impact of the lives taken, those left living who lost loved ones and the deeper questions that had to be asked regarding construction ethics, investment in remote rural areas. This will last well into the future.

It was the last thing China needed after suffering a terrible winter, after experiencing disturbances in Tibet and then suffering international

disruptions to the torch relay – nevertheless the Chinese people have pulled together.

A week after the 'quake, there was a three-minute silence across the nation. We went out on the street to film and the whole of Beijing shut down... everyone bowed in solemn respect.

It was truly eerie. I realised the depth and strength of the Chinese nation.

– Brendan Worrell



## Caring for culture and country

A pocket of land in East Arnhem Land lights up with performances, energy and insights that is the 2008 Garma Festival of Traditional Culture. **JASON M<sup>c</sup>INTOSH** explores the vibrant debate that takes place at the Festival's Key Forum, coordinated by Charles Darwin University.

ALL PHOTOGRAPHS  
Courtesy Yothu  
Yindi Foundation

He is an eminent, tough and highly respected Maori Treaty negotiator and today Sir Tipene O'Regan is face-to-face with academics, business leaders, policy-makers, Indigenous leaders and practitioners from across Australia and the globe.

Gusts of wind blow from the Arafura Sea, carrying his address to hundreds of people packed in and around the open shelter. As keynote speaker, his words set the pace at the Key Forum of Australia's most significant Indigenous festival, Garma.

Sir Tipene's words, humble and succinct, draw a picture of future indigenous engagement led by a vibrant and empowered collective.

"Until we take control and own our own dreams, we will always be dependent on others to tell us what our dreams should be," he says. "We must make new structures to maintain the cultural treasures that we have inherited."

More than 400 people are here to explore the theme Indigenous Culture: Caring for culture and country and to better understand the sacred link which indigenous peoples share with their lands.



This is the fourth consecutive Key Forum co-ordinated by CDU. The event is a major feature of Garma and directs attention to a specific topic of critical relevance to Indigenous Australians.

As Sir Tipene reflects upon his experiences in New Zealand, speakers from many walks of life and lands soon follow, contributing hearty debate to one of the nation's leading cross-cultural forums.

The addresses override the degrading stereotypes of Indigenous people as a resigned and simple race, exposing their robust determination, cultural vibrancy and struggles engaging with the wider society.

The cross-section of speakers ranges from lobbyists defending native rights in the Australian courts to Indigenous sea rangers speaking first hand of their roles as protectors of Australia's coastline. Diversity is a central theme of this forum.

Representing the Anishinaabe people of North America, Renee Gurneau spoke of the decolonisation process where indigenous people re-learned and reclaimed "everything that they are" and called for greater solidarity and information-sharing between the two continents.

The eldest sister of prominent Aboriginal leaders Galarrwuy and Mandawuy Yunupingu, Gulumbu Yunupingu, exudes pride as she welcomes the crowd on behalf of the Yolngu people.

For the next three days, words, some emotive and others reserved, are exchanged across forums and workshops.

From day one, three key issues begin to emerge: The ownership of Indigenous lands and the opportunities they provide; the role of community and government in partnering to develop opportunities, yet the questionable ability of government to recognise traditional structures and viewpoints, and draw Indigenous people into the discussions about the future; and the growing linkage between science-based and traditional ecological knowledge and the opportunity to do more to provide Indigenous livelihoods.

Chief Executive of the Northern Land Council, Kim Hill says that without land "Indigenous people would be wandering the streets" and speaks of more than 60 sea ranger positions created in the Top End.

CEO of the North Australian Indigenous Land and Sea Management Alliance, Joe Morrison highlights the different approaches taken by Indigenous and other people in driving ecological outcomes.

He urges a greater role for Indigenous people in the discourse, where funerals, ceremonies and other important community events, which maintain culture, need to be acknowledged in land management policy.

"Traditional ecological knowledge must underpin policy and represent Indigenous interests." He says government has failed to recognise and incorporate traditional ecological and cultural knowledge within policy.



A research fellow from The University of Queensland, Sean Kerins highlights government programs that force Traditional Owners to apply for funding through a maze of programs for what is often unsecured, short-term funding.

"Long-term planning is impossible to do with that," he says.

Leader of the local Madarrpa clan, Djambawa Marawili speaks of his people's difficulty in explaining the significance of their culture as they battle through the legal system as part of the Blue Mud Bay case. "By talking, or describing the significance of the bay through patents and designs, no one (in government) got it, so we documented it in a book then we were singing and dancing but government people still didn't understand," he says.

Indigenous Protection Area Manager and member of the Rirratjingu clan, Wanyupi Marika expresses his happiness at the momentous win and says the announcement gives local people more power to manage their lands. "I want to see information used in management, not sitting in a lawyer's cupboard," he says, calling on Customs, police and government to help rangers manage their waters and involve his people in commercial enterprises.

His views are supported by a Research Fellow at The Australian National University, Frances Morphy who says government has to see management of areas such as East Arnhem Land in the wider context of what the future might hold for homeland communities.

“For without them, the base for young people to learn Yolngu culture and for people to protect the coastlines is uncertain,” she says.

The link between health and culture is made on a number of fronts, echoing last year’s theme of tackling the crisis of Indigenous health.

Ophthalmologist and associate with The Fred Hollows Foundation, Professor Hugh Taylor discusses a program to eliminate the eye disease trachoma which affects many Indigenous Australians.

“We need to build on traditional culture to build emphasis to keep their faces clean and I’m confident, through antibiotics and education, we can beat this,” he says.

Researcher at CDU’s Menzies School of Health Research and general practitioner, Dr Paul Burgess explores the strong correlations between the health of Indigenous people and their relationship with culture.

“Indigenous people define landscape as a much more dynamic and sentient entity,” he says. “Caring for country was, to me, a positive health promotion activity.”

He speaks of research identifying robust elements of caring for country which shows that people who are engaged in more traditional practices are significantly healthier across many markers including weight, blood pressure, diabetes, and cholesterol.

Dr Burgess also cites ceremonies reinigorating health of landscapes and people, giving strength to body and spirit.

Taking up the fight for better health among her people, local role model and self-described strong woman, Djapirri Mununggirritj speaks about the struggles of her people. The Yolngu community leader from the Gumatj clan is unreserved in her passion for change: “When are fellow Australians going to sit by the fire and share and listen to our knowledge?”

“Australia, stand with us and see us as one, and teach us your ways to establishing our economies and closing the gap.”

She says the federal intervention has transformed her community: “Yirkalla has become a quiet community now, and the old people who take their children hunting are now getting a good night’s sleep.”

Aboriginal education consultant from western New South Wales, Tyson Yunkaporta explores Aboriginal ways of knowing and examines Indigenous knowledge as a living entity rather than the stereotypical art on the wall within non-Indigenous frameworks.

Business leader Micko O’Byrne urges a radical shift in industry and government to tackle Indigenous unemployment. The role of the government-subsidised employment scheme is hotly debated.

Addressing the closing plenary, Aboriginal and Torres Strait Islander Social Justice Commissioner Tom Calma makes a number of recommendations, including:

- Developing a national Indigenous representative body that gives a representative voice in the political and media arenas
- Encouraging government to follow rhetoric about partnerships and relating to people with solid investment and authentic commitment
- Increase and develop programs that maintain and enhance the relationship Indigenous people share with their culture and lands.

Commissioner Calma drew parallels between the urgency required in the improvement of Indigenous outcomes with that of the Australian Government investing millions of dollars in the late 1970s to create world class athletes.

“We’ve seen benefits where we invest into an initiative where there is a clean vision, target and a need to engage people to do it and this applies to the challenges laid out at Garma,” he says.





# A multiplex economy: Innovative approaches to developing remote Australia?

## OPINION

A creative approach to assisting remote Aboriginal communities to care for country is in the interests of all Australians, **ROLF GERRITSEN** argues.

Consider a farmer in southeast Australia. She plants trees to enhance the productivity of her farm. Trees shelter stock against winter chill and summer heat and improves their condition and calving or lambing rates. Trees reduce evaporation and so increase crop yields. The cost of the trees can be offset against the farmer's taxable income. Or the same farmer may be a member of a Landcare group engaged in cooperative local efforts to combat erosion of the banks of a creek flowing through several farms. In both instances, the generality of taxpayers subsidise these activities: in the first case through tax expenditures (potential government tax revenue foregone), and in the second, by direct governmental expenditure through grants from consolidated revenue to support activities deemed in the public interest.

PHOTOGRAPH  
Jason McIntosh

Now consider an Aboriginal family or clan group living on their country in remote Australia and burning it in the traditional mosaic pattern. This activity protects biodiversity in the landscape and, in northern Australia, may even reduce Australia's greenhouse gas emissions. On both measures it is an activity in the public interest. Governments are slowly coming to realise that Aboriginal land and sea management is an effective and efficient (and cheap compared with getting whitefellas to produce the same public good) method of the conservation of a sustainable and resilient environment in Australia. Currently, expenditure on these activities is nowhere near the level it is for agricultural land management and irrigation. So there is a case for greater public support of Aboriginal land and sea management in northern and central Australia.

ANTENNAE  
Professor Rolf Gerritsen  
is CDU's Research Leader,  
Central Australia.

I would take this one step further, arguing that this activity of the generality of taxpayers paying Aboriginal groups to manage their traditional country for environmental and biosecurity reasons could, with additional governmental innovations, be part of the solution to two interrelated problems:

- The absolute and relative poverty of Aborigines in remote Australia; and
- The difficulty these Aborigines have in coming to grips with the requirements of the public and private sectors in mainstream capitalist Australia.

The second problem requires Aboriginal people to be able to deal with mainstream society and its economic and governmental institutions. And for government to realise that people living on country generate positive externalities in terms of health and law and order expenditure. To do that requires governments (who set the rules) to understand that they are dealing with a distinct society; that is that Aborigines may be something other than "whitefellas-in-waiting".

Aboriginal social distinctiveness requires new approaches to governmental service delivery. For example, training an Aboriginal person in carpentry does not produce a career carpenter. So training has to start in generalist skills that complement Aborigines' preferred lifestyles. The way that health (through Flying Doctor medical chests) and education (the School of the Air) are delivered to pastoral communities provides a clue to decentralised service delivery methods that remove the perennial inefficiencies of recruiting whitefella service professionals to live in remote Aboriginal communities.

So if we think that Aborigines should engage in activities of meaning to them and have a higher degree of control over their lives, then we start with allowing them to begin this process through finding some economic security on their country. Consequent higher levels of self-confidence will, over time, produce more productive engagement with mainstream society than occurs at present. The economy that will result from that scenario will also be more productive and less unequal. But this result requires both patience and innovative approaches to delivering health, education and other services to small decentralised groups across remote Australia.

o

## Art smart

The Charles Darwin University Art Collection contains one of the largest Australian Indigenous limited edition print collections in the world. And ANITA ANGEL has one of the most enviable jobs as its curator.



INTERVIEW  
Raquel Dubois

PHOTOGRAPHS  
Courtesy CDU Art  
Collection

ABOVE  
Billy Benn Perrurle  
Artetyerre 2006  
Acrylic on board  
30 x 30 cm  
CDU Art Collection

IMAGE  
Courtesy the artist and  
Bindi Inc – Muerre  
Anthurru Artists

### What criteria are used to determine an art work's suitability for the CDU Art Collection?

The CDU Art Collection Management Manual sets the acquisition criteria, and I bear these in mind whenever I go to art openings, exhibition previews or am on the hunt for acquisitions (which is always!). The acquisition criteria focuses on "art by established and emerging Australian Indigenous and non-Indigenous artists, with particular reference to art with a connection to the Northern Territory and adjoining regions, including South-East Asia". Consideration is also given to acquiring major art works by staff and graduates of the Art School, particularly those who have gone on to establish professional careers as artists. The principal criteria for

acquiring works include: quality (aesthetic, historical and intellectual significance), relevance to the collection, authenticity and provenance, cost to acquire and maintain, and physical attributes or condition (conservation requirements).

### CDU has one of the largest Australian Indigenous limited edition print collections in the world. Why are Indigenous artists using modern techniques such as printmaking to produce their designs instead of traditional media?

Limited edition printmaking (on paper) is not really "modern" in the sense that Western artists have been using it as an image-making technology since at least the 15th Century, with metal engraving, and even earlier in the East for other print forms such as woodblock rubbings. Australian Indigenous artists produced a form of printmaking in ancient rock art, with hand stencils and rock engravings thousands of years ago. Indigenous artists in north Australia have in the past few decades embraced Western printmaking techniques in various media, for example linocuts, etchings and lithographs, as an extension of their existing art practices. It's not really a question of printmaking being a "non-traditional" media. For contemporary artists it's a choice they're free to make to suit their subject matter and creative vision.

### Has urbanisation, such as changing landscapes and the introduction of modern materials, affected the collectability of Indigenous art works?

Contact with white Australians and changes in the environment are reflected in all Indigenous art produced today – in a sense, since first settlement, all Indigenous art produced for Western audiences rather than for ceremony (including bark paintings) is "contact art". It is no less authentic for being secular or for sale. The introduction of new media such as acrylic paint, canvas, linen, paper and inks was at first considered a contaminant to a "pure" art form produced primarily for ceremony. Today, Indigenous art in its secular forms is as collectable as any other art form. It's no less "traditional" for employing introduced media. The test for collectability remains what it always has been: is it good art?

### Does the collection rely on donations or is there a program of acquisitions in place?

A large part of the collection comprises donations, which are accepted according to an acquisition program, just as acquisitions by purchase are. An acquisition fund recently established by the University Foundation will ensure that future purchases can be made in a more timely and strategic fashion – not only filling gaps, but consolidating and extending existing holdings with complementary works. We've had a number of incredibly generous individual donors and for several years now, the Art Collection has also processed donations under the Commonwealth Government's Tax Incentives for the Arts – Cultural Gifts Program.

**At present, there is no permanent museum to house and display the collection. How are the works made available for public viewing?**

A dedicated museum to store and display the collection will be incorporated in the new Administrative Building now under construction on Casuarina campus. This will be the first time since the collection was established in 1980 that it will have its own space. At present, a broad selection of holdings is displayed (and rotated) on Casuarina and Palmerston campuses in academic, administrative and business centres, and in the University's two main libraries. Access to other art works in storage is by appointment.

**How is the collection incorporated within CDU's art and design courses as a teaching tool?**

I've given a number of floor talks on Art Collection exhibitions held in the Art School's gallery, delivered lectures on a history of the Art Collection – the basis for a book which will be published by CDU Press, scheduled for 2009, and conducted lectures and tutorials to higher education (art history) or VET (printmaking) students. Indigenous high school students enrolled in VET courses have also been involved in the installation of art works for exhibitions in The Gallery.

**What's your favourite piece in the collection?**

That's a tough question and almost impossible to answer. The Art Collection comprises so many components: micro-collections that reflect its history as a teaching collection within the School of Art before the University was established, to the present day, as a collection repository of contemporary art including Indigenous prints. It's greater than the sum of its parts.

If pressed, I'd have to mention a recent acquisition by Tiwi artist Jean Baptiste Aputimi – a superb painting in ochres on canvas called *Jirtaka* (saw fish); several works on paper and canvas by Central Australian artist

Neridah Stockley; an early bark painting (in the library) by Curley Bardkadubbu entitled *Kumoken – Crocodile*; a gouache depicting anthills by Sydney artist John Firth-Smith; a Max Dupain vintage photograph of Mosman Bay at dusk, prints and bark paintings by John Mawurndjul and Kate Milwulku from Maningrida, a Fred Williams etching... I could go on.

**What is the theme of your current exhibition and why was this chosen?**

This year's Art Collection exhibition opened at The Gallery on 10 September. Like other exhibitions I've assembled or curated, it was inspired by a particular art work – not an idea, a theory or a theme. The springboard for this year's exhibition was a recent acquisition of an etching by renowned Australian artist Lawrence Daws, called *Head of Fairweather* – a print the artist created at a printmaking workshop at Griffith University and then editioned at home in 1978. Fairweather has a connection with Darwin, having lived in an abandoned hulk at Dinah Beach on Frances Bay for a spell in the early 1950s. He launched a raft from the headland near Bullocky Point behind the Museum, in an ill-fated journey to Timor (he only got as far as Roti). Raft Artspace in Parap is named after this incident and in Fairweather's honour.

Fairweather once described the process of making art as "something of a tightrope act", where you're poised between "representation and the other thing": in other words, he's talking about the aesthetic journey, rather than the actual one an artist makes in the process of creation. That's the journey that really counts. The exhibition displays a range of art works in various media, by Indigenous and non-Indigenous artists that show traces of that journey in painting, sculpture and printmaking. It's not an easy journey to make and not many artists get there – nor do we sometimes, as viewers or collectors of art. But I can assure you: it's always worth the risk.

o



**LEFT**

Maria Josette Orsto  
*Miyinga Jilamara* 2007  
Natural ochres on canvas  
120 x 90cm  
CDU Art Collection  
Image courtesy the artist  
and Tiwi Design

**RIGHT**

Lawrence Daws  
*Head of Fairweather* 1978  
Etching 12/40  
27 x 25 cm [image]  
CDU Art Collection  
Image courtesy the artist and  
Robin Gibson Gallery, Sydney

**WEB BYTE**

For information about the Commonwealth Government's Tax Incentives for the Arts – Cultural Gifts Program, see [www.arts.gov.au/tax\\_incentives/cultural\\_gifts\\_program](http://www.arts.gov.au/tax_incentives/cultural_gifts_program).



## Hermannsburg potters

Vibrant birds, animals and bush foods of Central Australia gradually spring to life as the Indigenous women quietly work on their pots.

The 10 women, working in clay which is coloured with the rich hues of the desert, are members of the celebrated group of artists known as the Hermannsburg Potters. They take their name from the former Lutheran mission based at the remote foothills of the McDonnell Ranges around an hour's drive south of Alice Springs. And they take their inspiration from the surrounding environment and from the long history of art that comes from their community.

The group visited Alice Springs recently to learn new methods for treating the surface of their pots and to build upon their already exceptional skills.

These latest pots were created at Charles Darwin University's Alice Springs campus and soon will adorn homes and galleries around the world.

Indigenous artists Albert Namatjira. The Hermannsburg Potters follow in his footsteps with a reputation for beautiful and striking works and, like Namatjira, they are strongly influenced by the teaching of art skills at the mission.

The group wanted to continue to learn more about pottery processes and, through manager Dr Margaret White, approached Charles Darwin University's Alice Springs-based Art lecturer Henry Smith for assistance.

His counterpart, Art lecturer Suzi Lyon, eagerly agreed to work with the women and developed a week-long program to explore ceramic and printmaking techniques that could be applied to their works.

Ms Lyon said she enjoyed exploring various techniques with the artists.

"Listening to their singing and learning language was really enjoyable for me as I got to understand more of their culture," she said.

"It's a real honour to share our knowledge with these women and they've clearly enjoyed their time here."

Dr White described the program as a success, saying the women gained many new skills.

"Suzi was outstanding in the way she worked closely with the potters and we are very grateful for her support," she said.

Dr White moved to the Northern Territory earlier this year to work with the potters and said she inherited a confident and vibrant group.

"My predecessor spoke of their shyness, but once the women saw their talents being recognised and started travelling to exhibitions, they became more confident and very proud of their work," she said.

Potter Heidwig Mokebaringa best summarised the artists' experience at the University.

"I really like being here learning new things and we will go back home with many new ways to make our work."

○

#### WEB BYTE

For more on the Hermannsburg Potters, visit [www.hermannsburgpotters.com.au](http://www.hermannsburgpotters.com.au).

‘It’s a real honour to share our knowledge with these women.’

#### TEXT

Jason McIntosh

#### PHOTOGRAPHS

Jason McIntosh

#### ABOVE

Gifted artists Rahel Ungwanaka (top) and Irene Entala at work in the Alice Springs art facility.

Hermannsburg pots regularly sell for five figure sums and are exhibited in major galleries across Australia including in the National Gallery of Australia, the Queensland Art Gallery as well as in many private galleries such as Alcaston in Melbourne and Milani in Brisbane.

Hermannsburg is the birthplace of one of Australia's most famous



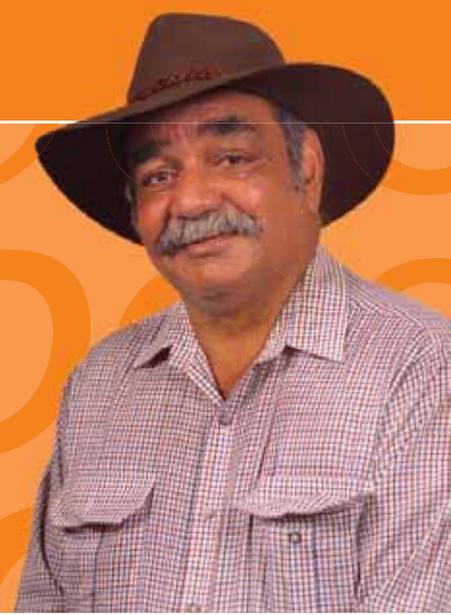
**‘Mwarre anthurre’**  
**Art works:**  
**Communities thrive**



The contribution of the arts to social cohesion: What works and why.

Crossing boundaries: The role of the arts in schools, art centres, festivals and tourism.

The intersection between the arts education and government policy Future directions.



## Out of the desert

Harold Furber is at the forefront of some of Central Australia's most creative community-building initiatives.

**ABOVE**  
Harold Furber

When Harold Furber takes his seat on the afternoon discussion panel at the Charles Darwin Symposium in October, he will bring a tapestry of experience in working creatively with Indigenous and non-Indigenous communities.

Mr Furber will join other leaders and artists for a panel discussion, which will present Indigenous perspectives on the future of Indigenous arts. It will be the finale of the day-long Symposium, "Mwarre anthurre" Art works: Communities thrive, in which the role of the arts in building social cohesion, cultural capital and business enterprise will be explored.

**TEXT**  
Robyn McDougall

These are topics Harold Furber has worked with and considered for decades. Chief among his current catalogue of commitments is holding the position of Deputy Chair of Desert Knowledge Australia, a Northern Territory Statutory Authority tasked with responsibility for a host of visionary ventures including the Desert Knowledge Precinct, a 73ha development near Alice Springs that is on the way to becoming an international hub for desert knowledge activities. The Precinct is the home base of the \$90m Desert Knowledge Co-operative Research Centre (DK-CRC) and the Desert Peoples Centre campus (a new association of Batchelor Institute

of Indigenous Tertiary Education and the Centre for Appropriate Technology). Mr Furber is the Chairperson of the Desert Peoples Centre and a Board Member of the DK-CRC.

The Alice Springs-based Desert Knowledge partnerships are part of a national and global network mandated to "build thriving desert knowledge economies, operating on the basic values of harmony, sustainability and wealth creation". But Mr Furber moves as easily and as regularly in the arts and sporting world as he does in the world of strategic thinking.

Born in Alice Springs, Mr Furber grew up at the Methodist Overseas Mission at Minjilang – now a remote community in Western Arnhem Land – in the '50s and '60s where he knew and witnessed some of the famous Bark Painters of Western Arnhem Land at work. He played football at senior levels in Darwin, Adelaide, Brisbane and Alice Springs. "Sporting and cultural activities, including arts help bring communities together," says Mr Furber. "They help form the glue that sustain community co-operation and harmonious relationships."

Recently Mr Furber has worked as Assistant Coordinator at the Titjikala Art Centre and Gallery located on the edge of the Simpson Desert, 120km south of Alice Springs.

But his work with the Desert Knowledge Australia partnerships and the Titjikala Art Centre give only a small taste of his reach and activities. Mr Furber has been involved in setting up a number of community-based organisations in Central Australia. He has also worked on Land Rights and Native Title issues, Reconciliation and the Stolen Generation matters. Mr Furber has attended the United Nations Working Group on Indigenous Populations in Geneva as well as other international meetings in Europe and the USA.

Mr Furber holds a BA in Management, majoring in Public Administration from the University of Canberra and a Diploma in Social Work from the University of South Australia.

**WEB BYTE**

Visit the Titjikala Art Centre at [www.titjikalaarts.com.au](http://www.titjikalaarts.com.au). Desert Knowledge Australia at [www.desertknowledge.com.au/dka/index.cfm](http://www.desertknowledge.com.au/dka/index.cfm).

## Cohesion through expression

Strong communities and a healthy arts industry are interdependent, according to a keynote speaker at the Charles Darwin Symposium, Professor Howard Morphy.

Over the past 30 years, Indigenous arts have achieved extraordinary success in terms of the multimillion-dollar industry it has grown. But it is the role it has, and will continue to play, in building social cohesion in Indigenous Australia which is of most value and will ultimately ensure the longevity of this cultural expression.

For thousands of years, art has been a means of expressing experiences and a vehicle for communicating ideas and values to the world and to future generations. It can also help to transform the environment in which people live, and provide inspiration and comfort to individuals and communities by expressing emotions in aesthetically powerful ways.

Director of the Research School of Humanities at The Australian National University, Professor Howard Morphy said art was essentially a form of knowledge and action.

“As a form of action, art can influence the world in innumerable ways. It both requires a community and helps build a community,” Professor Morphy said.

He points to the establishment of Yolngu art and the Boomalli network of Indigenous artists as just two examples illustrating the social cohesion concept.

“The famed Yirrkala Church panels grew out of the early threats to Yolngu sovereignty in the Yirrkala area and were the first significant land rights statement documenting Aboriginal custodianship of their country. The panels represent kinship and its importance and place in Yolngu law.”

The Yolngu people have widely used art to mediate the impact of European colonisation since the 1930s, and as a result have maintained their hunting and fishing economy while carrying on their rich ceremonial lives to the present day.

Established in 1987, the Boomalli Aboriginal Artists Co-operative is one of Australia’s longest running Aboriginal-owned and operated art galleries.

The 10 founding members of Boomalli as urban Indigenous artists finding it difficult to have their own work shown as authentic Aboriginal art in the mainstream, established a co-operative to provide a platform for Aboriginal and Torres Strait Islander artists to exhibit and promote urban Indigenous art and culture on their own terms.



“One of the primary aims has been to redress some of the social inequities experienced historically by Indigenous artists and provide an authentically strong cultural voice within a contemporary Australian context,” Professor Morphy said.

The Boomalli Co-operative still strive to emulate the original objectives of the founding members by providing continuous support to Aboriginal and Torres Strait Islander artists so that they can exhibit and promote Aboriginal art on their own terms and to endorse self-determination and self-management for artist members as well as the wider Indigenous community. In doing so, artists continue to provide a strong and distinctive cultural voice for urban Aboriginal art.

“This has been achieved by making it possible for artists to take direct curatorial control of their individual exhibitions as well as devising their own marketing and sales strategies, thereby reclaiming processes which have been traditionally controlled by non-Indigenous stakeholders.”

Professor Morphy said that in the instances of the Yolngu and the Boomalli Co-operative, Indigenous art, as a contemporary practice, has been an undercurrent to the creation of each community and has enabled artists to work together to achieve wider community objectives.

#### TEXT

Richie Hodgson

#### ABOVE

Professor Howard Morphy

#### PHOTOGRAPH

Courtesy Howard Morphy

## Using the arts to build strong communities

Indigenous arts have achieved international acclaim but their importance may be much more significant back home within communities. SYLVIA KLEINERT introduces the Charles Darwin Symposium, “Mwarre anthurre” Art works: Communities thrive.



**PHOTOGRAPH**

Courtesy Sylvia Kleinert

The Charles Darwin Symposium in Alice Springs on 1 October is an exciting opportunity to hear leading Indigenous and non-Indigenous experts speaking on the arts. The symposium, entitled “Mwarre anthurre” Art works: Communities thrive, brings together Indigenous representatives, leading researchers, academics, including CDU’s own staff, as well as regional and Federal Government authorities. It is designed to encourage lively and informed debate on issues of importance to all Territorians.

Indigenous culture will be pivotal to the symposium. “Mwarre anthurre” Art works: Communities thrive weaves the Arrernte word “Mwarre anthurre” (pronounced Mar-da an-thurdda) meaning good, right and proper into the title. Used with permission of the Lehre Artepe Aboriginal Organisation, the word “Mwarre anthurre” pays respect to the traditional owners of the Alice Springs region.

During the past 40 years the Indigenous arts have achieved extraordinary success. Since the development of acrylic “dot painting” at the government settlement of Papunya, in the south-west corner of the Northern Territory, in the early 1970s, Aboriginal art has become a multi-million-dollar industry that is widely acclaimed in Australia and overseas. Indigenous performances are now a central feature of local, national and international events such as the opening of the Olympic Games in Sydney 2000 and, in recent

years, Indigenous culture has become a major focus of domestic and international tourism.

Government agencies, both locally and federally, are partners in this success through the cooperative development of policies and strategies designed to foster and support the arts.

But how should success be defined? Is it just the record prices achieved at auction? And is it more than just the visual arts? What of the diversity of Indigenous art forms – from the visual arts and film to literature, music and dance? This one-day symposium provides an exciting opportunity to debate and challenge these popular perceptions.

For Indigenous people, the arts are central to their wellbeing. The arts reinforce connections to country, help build individual and community identity, and foster social cohesion. And with the arts comes education, training and employment with the opportunity for economic sustainability through the development of business enterprise.

Leading the Symposium will be two keynote speakers: Minister for Natural Resources, Environment and Heritage, Parks and Wildlife and Central Australia, the Honorable Alison Anderson MLA, and Head of the Centre for Cross Cultural Research at The Australian National University, Professor Howard Morphy. They will introduce the Symposium by addressing the question: How do the arts foster social cohesion in communities?

In the following session, educationalists including writer Veronica Perrule Dobson, CDU’s Anja Tait and Leonie Murrungun will examine the tangible outcomes of art and music programs in schools and communities. The Symposium will then explore the way the arts enhance social cohesion by bringing communities together to create a meeting place for cross-cultural exchange. Featuring in this discussion will be the Barunga Festival south east of Katherine celebrating its 23rd anniversary, the innovative cultural tourism projects developed by Papulankutja artists in Blackstone, West Australia and the recently established Tangentyere Artists providing art and marketing services for the artists and residents of Alice Springs town camps.

**WEB BYTE**

Visit the Charles Darwin Symposium website at [www.cdu.edu.au/cdss/series.html](http://www.cdu.edu.au/cdss/series.html).

Government policies and strategies are crucial to the success of these initiatives. Keynote speaker, Northern Territory Minister for Arts and Museums, Indigenous Policy, and Education and Training Marion Scrymgour will address the question: What is the intersection between the arts, education and policy? She will be joined by a panel of experts drawn from local and Federal Government agencies. These include Chief Executive Officer of the Australia Council, Kathy Keele; Chief Executive Officer of the National Association for the Visual Arts, Tamara Winikoff; Executive Director, Northern Territory Department of Environment, Heritage and the Arts, Lyn Allen; and Executive Director Central Australia, Northern Territory Department of Employment, Education and Training, Sue Murphy.

Rounding off this exciting program will be a group of senior custodians who will address the question: What happens next? Board member for the Centre for Desert Knowledge Harold Furber, ANKAAA Chair Djambawa Marawili, and cultural advisor, teacher, author and artist Margaret Kemarre Turner will provide an Indigenous perspective on goals for the 21st Century.

With the focus on Indigenous arts, the Symposium is a significant opportunity to feature cultural performances from Indigenous artists.

Leading the Symposium as Master of Ceremonies will be Director of the Alice Springs tourist development Jungala Enterprises, Jungala Kriss. This will be followed by a welcome to country provided by traditional owners from the Lehre Artepe Aboriginal Organisation. Highlights of the Symposium will include a cultural performance by women dancers from the Amoonguna community, and a lunchtime performance by the well known Alice Springs band, NoKTuRNL.

This is an exciting time for the Alice Springs region. Through the Symposium, Charles Darwin University will make a vital contribution to the cultural events planned for Alice Springs at this time. "Mwarre anthurre" Art works: Communities thrive, will link directly with the Desert Mob Symposium on the 26 September 2008 and the Desert Mob exhibition at the Araluen Arts Centre and Art at the Heart, the national conference of Regional Arts Australia opening on 2 October 2008.

Undoubtedly this exciting Symposium will attract a wide-ranging audience. "Mwarre anthurre" Art works: Communities thrive will be of direct interest to artists and educators, those working in the art industry, academics, government agencies and the wider public.

Most importantly, the Symposium welcomes Indigenous people from Alice Springs and the surrounding region.

#### o

#### ANTENNAE

Sylvia Kleinert is Associate Professor of Australian Indigenous Art in the School of Creative Arts and Humanities, Faculty of Law, Business and Arts, at Charles Darwin University. She is also convenor of the Charles Darwin Symposium entitled "Mwarre anthurre" Art works: Communities thrive.

## New from CDU Press



### **Future Options for North Australia**

**Stephen Garnett, John Woinarski,  
Rolf Gerritsen and Gordon Duff**

paperback 65pp

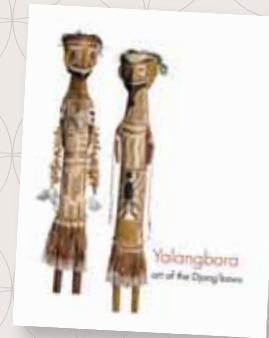
ISBN-13: 9780980384659

What will drive the future of tropical Australia? The four authors of this book, all of whom have a close association with the Cooperative Research Centre for Tropical Savanna Management, identify 10 major drivers that will shape the north: population, social function, property rights, Commonwealth policy, the global economy, resource use, oil futures, climate change, invasive organisms and technological innovation.

For each driver, they identify the risks, uncertainties and the extent to which they can be controlled by the people of the north.

They also describe seven possible futures: chronic underdevelopment, degeneration, a northern rice bowl, an industrial powerhouse, environment first, an Indigenous community Utopia and dynamic urbanisation. These are not predictions, but rather scenarios to make readers think and realise that the decisions being made today will have a profound influence in the future.

Whereas for the rest of the world, the future has largely been set by unplanned development and the irrevocable contingencies of history, northern Australia can be moulded by deliberate and considered choices. The current generation has the opportunity and frightening responsibility to make those choices.



### **Yalangbara: Art of the Djang'kawa**

**Margie West**

paperback

ISBN-13: 9780980384673

*Yalangbara* is the first Indigenous art publication to focus on one significant ancestral site. It has been produced on behalf of members of the Rirratjingu clan to celebrate Yalangbara (Port Bradshaw), the landing site of the Djang'kawu ancestors; the law-givers and progenitors of the people throughout north-east Arnhem Land.

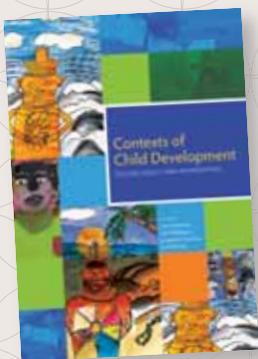
Their creative activities are depicted by three generations of talented Marika artists, including Mawalan 1, Mathaman, Milirrpum, Roy, Wandjuk, Banduk, Dhuwarrwarr, Mawalan 2, Jimmy Barrmula and Wanyubi Marika.

The accompanying text examines aspects of Yolngu (Aboriginal) aesthetics and material culture, history, myth, land ownership and copyright to show the complex interrelationship of these themes in Yolngu life.

Margie West AM holds the honorary position of Emeritus Curator of Aboriginal Art at the Museum and Art Gallery of the Northern Territory. She is an anthropologist with more than 30 years of curatorial experience in Indigenous art.

Since 1972 she has curated more than 40 semi-permanent and touring Aboriginal art exhibitions and has published extensively on Aboriginal art.





**Contexts of Child Development:  
Culture, policy and intervention**

**Gary Robinson, Ute Eickelkamp,  
Jacqueline Goodnow and Ilan Katz, editors**

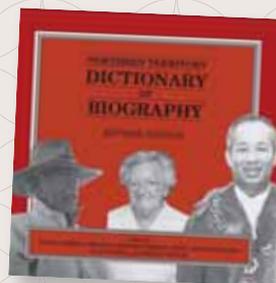
paperback  
ISBN-13: 9780980384680

This volume contains an inspiring and thought-provoking collection that aims to deepen understanding of child development to influence positively the people, policies and practices that help shape children's lives.

Drawing on a range of methodological, theoretical and practical perspectives, and on leading Australian and international research, the volume challenges the reader to consider issues as diverse as the continuing impact of past colonial policies and practices on Australian Aboriginal child development today; the ways in which a focus on "learning through the arts" can be beneficial to other areas of development, including literacy; and the potentially disabling consequences of the socio-culturally biased construction of what constitutes a "good childhood" which currently underpins policy in the United Kingdom.

A key concern of the collection is to advance insights and understandings of child development in relation to questions of cultural diversity, social disadvantage and state-supported interventions. Hence, many of the contributions focus on the outcomes of child development in Australian Aboriginal communities, including Ernabella and Docker River in the Western Desert, Darnley Island in north-east Queensland, the Tiwi Islands in the Northern Territory, Yakanarra in the Kimberley, and the Yorta Yorta in rural Victoria.

While the editors consider that the contributions collectively "point to complex patterns of intergenerational reproduction of disadvantage for which there is no single intervention point", they conclude that the challenge for educators, policy-makers, governments and communities alike is to find and follow the ways and means by which it is possible to support the outcomes of child development in order that the deleterious effects of multiple disadvantage might be undone.



**Northern Territory  
Dictionary of Biography  
A revised edition**

**David Carment, Christine Edward,  
Barbara James, Robyn Maynard,  
Alan Powell and Helen J. Wilson,  
editors**

paperback and cd  
ISBN-13: 9780980384697 (cd)  
9780980457810 (pb)

This revised edition of the *Northern Territory Dictionary of Biography* brings together the entries from the original three volumes, published in 1990, 1992 and 1996.

The *Dictionary* spans the period from the early British and French explorers of the Northern Territory coast up until the mid-1990s. It aims to provide a broad reflection of life in the Territory rather than focusing on eminent public figures.

In some cases this has meant that some subjects are included about whom relatively little is known. The authors come from the widest possible cross-section of the community and there is a considerable range of writing styles. The principal interest of the volume is the Northern Territory. In all cases, the Territory experience of subjects, however eminent they might have been elsewhere, is thus the focal point of entries.

This volume is available on CD and in a limited paperback edition.



# ‘Mwarre anthurre’ Art works: Communities thrive

## A free public forum in Alice Springs

Wednesday 1 October

Theatrette  
Centralian Senior Secondary College Building  
Grevillea Drive, Alice Springs

[www.cdu.edu.au/cdss](http://www.cdu.edu.au/cdss)  
[cdss@cdu.edu.au](mailto:cdss@cdu.edu.au)  
telephone 08 8946 6202



I think



Charles Darwin Symposium 2009

# Charles Darwin: Shaping our *Science, Society & Future*

The year 2009 marks the 200th anniversary of the birth of Charles Darwin and the 150th anniversary of his work *The Origin of Species*.

Through a combination of meticulous observation and innovative thinking, Darwin developed an explanation for the incredible variety of living things: that evolution is driven by natural selection.

This Symposium will provide an opportunity to appreciate, debate, and even challenge Darwin's findings, and will bring together an exciting range of speakers from around the globe.

Charles Darwin's scientific knowledge and rigour, acquired through human curiosity and ingenuity, have contributed significantly to the advancement of humanity.

For more information or to register, please visit [www.cdu.edu.au/cdss2009](http://www.cdu.edu.au/cdss2009)

CHANGE  
YOUR  
WORLD. **CHARLES  
DARWIN  
UNIVERSITY**

