CHARLES DARWIN UNIVERSITY

ORIGINS

2004 EDITION 2

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vice chancellor’s comment

Welcome to Origins

A tangible sense of energy marks the first year of Charles Darwin University’s entry into both Australia’s higher education and vocational education and training sectors.

We were inaugurated through a vision of creating a thriving university - one that fosters the courage to be different and one that cherishes and realises its geographic and demographic advantages.

Through this vision we have been working hard at synthesising the contributions of a number of former institutions into a new, affordable place of learning that offers a fresh choice for further education in Northern Australia and beyond which includes a significantly enhanced interaction with secondary school students.

We have also focussed on expanding the capacity of our staff, our students and our professional relationships - evolving as an accessible cultural and intellectual asset engaged with and relevant to the wider community.

It has been a dynamic process with important learnings that will influence our future and great rewards, some of which are recognised in this edition of Origins.

In 2005 we will continue to thrive and grow - not just because we are new, unique and fortunate. It will be because of our ability to display an energy that is committed to making a difference in every aspect of life.

Let us all challenge ourselves next year.

Vice Chancellor,
Professor Helen Garnett

Professor Helen Garnett with a piece by Frank Gohier, featured in the article ‘Art mattersÕ

Fresh talent for a new institution - Charles Darwin University continues to expand the professional skills and capacity required to ensure the University develops as a place that dares to be different, prepared to take on challenges and is committed to making a difference.

n o r t h e r n e x p o s u r e

EXECUTIVE DIRECTOR OF BUSINESS DEVELOPMENT

Dr Claire Baxter joined Charles Darwin University as Executive Director of Business Development. Dr Baxter was previously with the University of Sydney where she was responsible for contract research, consultancy, intellectual property management and commercialisation including facilitation of development of start-up companies.

In that role, Dr Baxter oversaw rapid growth in industry interaction and commercialisation with the value of contracts increasing from under $10 million to over $50 million a year and the number of spin-off companies rising from none to an average of six a year.

Dr Baxter, who has a PhD in Biochemistry and a Masters in Professional Accounting, possesses significant high-tech business experience. From 1985 to 1995 she was the managing director of biotechnology company, Bioclone Australia Pty Ltd, which is one of the country's leading manufacturers of medical diagnostic products.

She has held many private and public sector committee and board positions including former memberships of the Prime Minister's Science and Engineering Council and the New South Wales Innovation Council.

Charles Darwin University Vice-Chancellor Professor Helen Garnett said Dr Baxter's appointment provides strong strategic leadership for the business development functions across the university.

"Claire Baxter's appointment is a significant one in terms of leveraging our education and professional capabilities to provide and nurture future returns to the university and the Northern Territory Community through involvement in a variety of commercial, marketing and networking initiatives," Professor Garnett said.

DIRECTOR INTERNATIONAL

Charles Darwin University welcomes Dennis Meehan in the role of Director International. For the past seven years Mr Meehan worked in the International Office at the University of Technology, Sydney, initially in the capacity of International Marketing Manager and then as Deputy Director International. This was a period of rapid growth of the International Program at UTS with the numbers of international students at the institution growing to exceed 5,000 as well as a large cohort of UTS Australian students studying abroad.

Prior to this he held the position of Deputy Director, International Centre at the University of Western Sydney.

Mr Meehan has a Bachelor of Arts and a Diploma of Education from the University of New England and a Master of Education from the University of New South Wales.

In his role as Director International, Mr Meehan works with the University Executive, the International Office staff, the Faculties and Schools to grow the profile of international students at Charles Darwin University and to facilitate opportunities for its students to study abroad.

DEAN OF LAW, BUSINESS AND ARTS

Professor Eugene Clark has been appointed as the University's Dean of the Faculty of Law, Business and Arts. The Faculty includes a wide range of Higher Education and VET programs in Art and Design, Business, Hospitality and Tourism, Humanities and Social Sciences, Law and Music. In recent years it has expanded its profile in research and development and is actively trying to further its business development.

A key focus of Professor Clark's appointment will be to pursue linkages with relevant government, professional, industry and community groups, to enhancing the Faculty's and the University's teaching and research profile and to developing and promoting international activities.

Professor Clark's academic experience is drawn from institutions across Australia,

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North America, Asia and the South Pacific. Professor Clark was Head of School and Professor of Law at the University of Canberra. He has held a number of Pro-Vice Chancellor positions at the University of Canberra and, as an e-business and e-government lawyer, has established successful off-shore teaching programs in Asia and online education in Australia.

A finalist in law for the inaugural National Teaching Excellence Awards, Professor Clark has been published in numerous publications as well as being co-author of Managers and the Law.

He was also Leader of Courtroom of the Future project involving interdisciplinary research and training related to courts in modern society. Justice Kirby of the High Court of Australia is Chairman of the Advisory Committee for this project.

DIRECTOR CORPORATE COMMUNICATIONS

Communications professional, Richard John, has joined Charles Darwin University as Director, Corporate Communications.

Relocating from Sydney, Mr John brings a wealth of marketing, public affairs and negotiating experience gathered from Australia and internationally to his new Darwin based role.

Dr. Claire Baxter

Dennis Meehan

Prof. Eugene Clark

Richard John

Mr John holds a Bachelor of Arts and a Master of Arts from the University of Newcastle.

His background includes education and educational publishing, the foreign service as a diplomat in Greece; senior multilateral management and marketing; consultancy in marketing communications and public affairs and senior executive search. He also spent some time in the coal industry as Executive Director of the coal industry association in NSW.

Much of his work undertaken with and for major corporations in the United Kingdom and Australia has been the development of strategic communications planning. Such organisations have included the Federal Government, Dwr Cwmru Welsh Water and the State Bank of NSW.

Image courtesy of Peter Nicholas

solving the riddle of the world's biggest fish

solving the riddle of the world's biggest fish

265 biggest fish

Coming face to face with the gaping mouth of a 12-metre shark in the warm waters of the Indian Ocean has been an amazing experience for Michelle Press.

Holding a Bachelors of Science in Marine Biology from the University of West Florida, Ms Press is about to complete her Masters of Tropical Environmental Management at Charles Darwin University.

She has dedicated her masters research to the enigmatic whale shark, looking to discover whether individual whale sharks return each year to Western Australia's famous Ningaloo Reef.

Speculated to live up to 150 years of age, the whale shark is the sole species of the Rhincodontidea family and is closely related to nurse sharks, leopard sharks and wobbegongs. Like their near cousins, whale sharks have distinctive body markings which are believed to be used for camouflage and visual recognition. However, unlike their cousins, whale sharks are filter feeders that predominately target small prey such as copepods, krill and baitfish.

The huge size of an adult whale shark and some special physical attributes means it has few predators. Their back is covered in small scales called denticles that act in a similar fashion to a turtle's shell providing an incredibly strong surface. Beneath this lies up to 14 centimetres of thick cartilage tissue. These characteristics make whale sharks a second-thought proposal for large sharks or killer whales.

"There is photographic evidence where the teeth of a large shark have been ripped out and remained embedded into a whale shark's back after an attack. The whale shark lost its dorsal fin but survived," Ms Press explained.

Whale sharks also have the unfortunate mantle of being the world's most expensive shark flesh. Sold in Taiwan at up to $US11 per kilogram, a single average sized adult whale shark can be worth up to a whopping $US200,000 - a rich day's fishing in any language.

Little is known about their breeding habits apart from the fact that they hatch eggs internally. The only pregnant female whale shark ever caught was, amazingly, carrying up to 300 young at various stages of development. Three of these young were subsequently raised in captivity thus expanding our knowledge about whale shark growth and development.

"Despite this, whale sharks remain a bit of a mystery. Although protected under Western Australia's Wildlife Conservation Act, their status as either an endangered, rare or vulnerable species is contentious as there is simply not enough scientific knowledge of the whale shark's biology, ecology or behaviour to make a determination," Ms Press said.

"Ningaloo Reef is one of the few accessible places in the world where wild whale sharks congregate in significant numbers."

"Unproved theories of why the 4,572 square kilometre Ningaloo Marine Park is a whale shark hot spot includes breeding, a northward migration to warmer tropical waters or the annual mass spawning of coral in the area," Ms Press explained.

Through photo-identification research, Ms Press is about to conclude her research that will help to scope whale shark visitation to and aggregation at Ningaloo between March and July each year.

"While a common research tool, until now there had been no published attempts to use photo-identification in whale shark research.

"A photographic database of individual whale sharks that have visited the Ningaloo Reef area over the past ten years has become available through a history of images taken by a local enthusiast Dr Geoff Taylor, those taken by local ecotourism boat operators, and images taken by myself and my supervisor, Dr Mark Meekan, a Research Scientist with the Australian Institute of Marine Science."

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As part of the process, Ms Press catalogued the sharks according to distinguishing marks, fin and body size and their unique spot patterns to re-identify individuals in future surveys. Once individual animals have been identified, an attempt to match sharks sighted more than once will be undertaken.

Collectively, these images offer important evidence of returning whale sharks and areas most frequented by these sharks.

"In total we have identified 265 individual whale sharks that have visited Ningaloo Reef between 1992 and 2004," Ms Press remarked.

"Of these, we determined that 61 whale sharks have been resighted at Ningaloo Reef during this time. The photo-identification process also indicated some of the animals returned on several occasions and some after an incredible 12 year absence."

Ms Press' photo-identification project is part of a larger global tagging project headed by her supervisor Dr Meekan and partnered with scientists from the National Oceanographic and Atmospheric Association and the University of New Hampshire.

"Fifteen of the photographs used in this study were taken during a field trip associated with Dr Meekan's tagging project in Ningaloo reef in May 2004."

Some of the whale sharks photographed by Dr Taylor have id tags associated with them for future identification and all 15 of the whale sharks photographed during Dr Meekan's field trip have popup archival tags associated with them. These tags collect and store information about depth, temperature and light levels of the shark's surroundings every minute for up to nine months to track their migration.

Ultimately, the research to determine why whale sharks occur predictably at Ningaloo Reef is vital if the areas important to sharks are to be protected in a multi use environment that includes fishing, oil prospecting, tourism and conservation.

"There is great conservation and financial incentive. For example while a whale shark may be worth up to $US200,000 dead, the whale shark ecotourism industry at Exmouth in Western Australia is estimated to be worth $17 million annually, Ms Press said.

"Publishing this photographic catalogue may also assist in the tracking of individuals to Indonesia where many whale sharks are targeted for the commercial fishing industry as well as throughout the rest of the world where whale sharks are found.

Her research findings will be presented during November.

"I hope that this project will be the start of a global photographic catalogue of whale sharks to allow for a better understanding of migration patterns and aggregation sites," Ms Press said.

"In total we have identified 265 individual whale sharks that have visited Ningaloo Reef between 1992 and 2004"

Australian pilots could soon be flying with sophisticated electronic flight bags, thanks to the ingenuity of a Northern Territory pilot and IT professor who has been trialing Tablet PCs and new communications technologies in the cockpit.

Associate Professor Bob Pascoe, Head of Charles Darwin University's School of Information Technology, regularly flies his six seater PA32 aircraft from Darwin to Melbourne or Sydney. He is working together with colleague Dr Andrew Finegan and research students Neil Crossley and Michael Pascoe.

"Pilots carry flight bags, often including over a thousand pages of paper and weighing many kilograms. These flight bags carry essential flight information, including so-called instrument approach plates which are required for landings in bad weather," Associate Professor Pascoe explained.

"Pilots can now have all that information, plus more, at their fingertips with Tablet PCs. Also, with our system we use new communications technology to cheaply update the information digitally in the air in most regions of Australia. It is a safer and much more efficient way of flying."

Electronic flight bags already exist but are still in a primitive form and are usually used on ordinary laptop computers. While less cumbersome than paper, pilots must still look up an index, click on appropriate documents to select the ones they need and wait for them to appear on the screen.

With the HP Tablet PCs and software being developed at Charles Darwin, all the information the pilot requires is available instantly. Using Bluetooth connectivity to a GPS system, the Tablet computer knows the aircraft's exact position at any time, and can predict the flight information the pilot will need.

Under the old paper-based system, pilots are still issued with paper updates, which must be manually inserted into the documentation in their flight bags.

"Where there is human intervention, there is room for human error, and it is possible to misfile updates, so it is not a foolproof system."

"I was once flying in to Sydney's Kingsford Smith airport and heard a 737 pilot on the air traffic control frequency ask for a so-called visual approach. It appears he had misfiled some documents he would have needed to make an instrument approach. Lucky the weather was clear."

He much prefers the safety of the new system.

A year ago the School received a $220,000 cash and equipment grant from Hewlett Packard to do research in the application of Tablet Computers in education.

"There have been several spin-offs of that work, generally focusing on mobility issues. The present aviation package is one of them. I first wrote some aviation software over 15 years ago, but that was only for the flight planning phase - before the flight commences. Without tablet computers we couldn't walk on board with this information."

Associate Professor Pascoe and his team are using the new X1 data connectivity package from Telstra, and HP Tablet Computers to research a whole new range of electronic flying aids which can be carried on board aircraft for auxiliary use by pilots.

"Tablet PCs have a magnificent form factor. They fit easily on my lap, and because they do not have a lift up screen, there is no interference with the cockpit controls."

He also notes that the handwriting interface of the Tablet PCs is a much more natural interface for pilots, who have to be ready to write down rapidly delivered Air Traffic Control instructions. continued>

> *"We were flying over the Simpson Desert,* with internet access at our fingertips."

The improved long-range data communication technology, which the University has been given by Telstra to test in the aviation environment, is making the mobile technology even more connected.

"My son Michael and I were returning from a family holiday skiing at Mt Hotham in Victoria in August. We were flying over the Simpson Desert, with internet access at our fingertips. The Simpson is unbelievably remote, waves of sand as far as the horizon. Yet, several kilometers up, I had perfect connectivity."

Associate Professor Pascoe is not underestimating the issues involved however indicating that aviation is a conservative environment, and for good reason.

"We are using electronic devices that have a small potential to interfere with the certified electronic instrumentation and control systems on the aircraft. We have tested for this interference and believe that the risk is very low."

"Certainly, we believe that we can demonstrate that the gain in safety by using this technology far exceeds the miniscule risks. As with any new technology, there are risks and we are taking the responsible position of evaluating these rather than sticking our heads in the sand."

"Ultimately, the name of the game is to **improve aircraft safety** for both small and large aircraft."

music for learning

for life

A Charles Darwin University PhD student is one of five exceptional individuals that have been recognised nationally for 'outstanding contributions to improving literacy and/or numeracy'.

Musician, music educator and music therapist, Anja Tait, has developed, trialed and evaluated an arts-based approach to the teaching of literacy and numeracy to Indigenous students. She received $10,000 as part of the 2004 Federal Education Minister's award announced in August.

Ms Tait's research creates explicit links between skills development in music and related arts with literacy and numeracy. Her research was based in Darwin urban schools with high Indigenous enrolments.

"This award honours the school communities, and in particular the teachers who had the courage to embrace the arts and transform their teaching practices," Ms Tait said.

Mother of a three-year-old daughter, Ms Tait has worked on her research project titled 'Music for Learning for Life' since October 2002. It is an 'Education and the Arts Partnership Initiative' funded by the Australia Council for the Arts.

"This project focuses on educational outcomes for Indigenous upper-primary students when intensive music education is authentically integrated with literacy and numeracy teaching and learning," Ms Tait explained.

"Participating teachers reported that the programme's model of shared planning, team-teaching and evaluation promotes an increased sense of efficacy through reflective teaching practices, increased specialist art skills and enhanced student/teacher relationships."

Ms Tait's professional time is shared between her PhD research and her role as member of the Music Advisory Support Team, with the Northern Territory Music School - which is part of the NT Department of Employment, Education and Training - where she has an opportunity to apply her skills and ideas in urban, rural and remote Indigenous schools throughout the NT.

Student outcomes from the research project include evidence of:

- improved reading achievement of up to 1.8 years during a nine month period
- Improved mathematics achievement of up to 2.1 years during a nine month period
- Increased participation in classroom learning and confidence to ask for help
- Increased involvement of families in students' learning tasks and school community activities.

Ms Tait's primary supervisor, Professor Ian Falk who is the University's Chair in Remote and Rural Education, said that Anja originally came in to see 'someone' in the University's School of Education about one year ago to ask for assistance with the evaluation component of an Australia Council grant proposal she was preparing.

"Our discussions subsequently broadened into talk of doing a Masters so that she could 'double up' on her good work with myself becoming her primary supervisor and Dr Neville Grady, who also works at Charles Darwin University, her co-supervisor."

"Anja's initial response regarding talk of undertaking higher education was... 'but I'm the mother of a very busy toddler!'"

"However, she took on her post graduate study and her project was soon upgraded to a PhD, with the support of another staff member, when it became apparent that her work was of significance.

Since then she has been invited to present the research at national conferences and research seminars.

Ms Tait is an invited keynote presenter for the World Congress of Music Therapy to be held in Brisbane during July 2005. The proposed topic is: Making the links: Music, Indigenous health and education in the Top End of Australia.

This presentation will include Ms Tait's 10 years of work in music therapy in the Top End across gender, generation, and culture, in home, hospital, and community care as well as her current research in music and related arts education.

"An unanticipated outcome of the research is that Liliane Marie, 'the toddler', is now almost four years old, and each morning asks me if I am going to uni-work or other-work," Ms Tait remarked.

"She tells me that when she's bigger that she'll go to uni-work too!"

meeting marvellous marvin

A local award winning IT solution that removes the language barrier that can block Indigenous Australians access to health and education services is being marketed and installed beyond the Territory by Charles Darwin University's Centre for Remote Telecommunications Solutions.

"Through a teaming agreement with the developers of MARVIN, Inchain Pty Ltd, the Centre is currently working closely with the Northern Territory and Federal governments to promote and implement this product in some of Australia's most remote communities," explained the Centre's Director, Mr Bill Treacy.

MARVIN - or Messaging Architecture for the Retrieval of Versatile Information and News - is an animated computer product that is revolutionising the way important health messages are delivered to remote NT communities.

Collaboratively developed by the NT Department of Health and Community Services, the NT Department of Employment, Education and Training and Inchain, MARVIN was originally aimed at tackling the issue of substance abuse in remote Indigenous communities.

However, it was soon recognised that MARVIN was a potential solution to a much wider suite of applications where language and cultural differences, nationally and internationally, are an issue.

"Language is one of the major barriers that face health and education professionals in their attempts to communicate important information to Indigenous communities in remote areas of the NT and other parts of Australia," Mr Bill Treacy said.

"MARVIN allows community members to develop the learning and training resources themselves, typing in their own messages and recording their voices in their languages. The onscreen result is walking, talking, computer generated characters modelled on local elders or on the learners themselves."

The Centre for Remote Telecommunications Solutions was established at Charles Darwin University in 2003 with the aim of providing solutions to remote communities, promote information communication technology within the NT and export NT developed technology.

"As a result of the Centre's recent efforts to export technology beyond the NT, MARVIN is currently being used on a pilot project by a major federal government agency prior to its potential use on a national long term Indigenous study.

"There is also significant interest in the product from a number of other federal and state agencies," Mr Treacy remarked.

meeting marvellous marvin

titillating the tastes

titillating

Urged by his parents to take up a career that could take him around the world and mean that he would never go hungry, internationally experienced chef, Athol Wark, has arrived as the new lecturer in hospitality at Charles Darwin University's Alice Springs campus.

Bringing with him a culinary background that includes work in England, France and some of Australia's best-known five star establishments, the 39-year-old father of two has carved out a niche for himself specialising in using Australian ingredients.

Some of the dishes Mr Wark has prepared include river mint smoked barramundi pate and semidried kutjra (tomato), bunya nut used in a hummus and camel - 'a beautiful lean product' - used in a beetroot skewer with native currant and mango salsa.

"You need to experiment with different ingredients to arrive at a dish and flavour that separates your food from the usual," Mr Wark explained.

"It really is all about destination marketing. A guest can have eggs and bacon for breakfast anywhere so you need to focus on making it uniquely delicious and memorable for the customer to make your mark."

It is this experimentation that led Mr Wark to arrive at his signature dish - the Emu Egg Pavlova.

"The saltier, lighter emu egg is equal to about a dozen chook eggs and when prepared can serve around 28 people. It is pretty economical but a pricey product.

"But the great thing is that all of the product can be used. The white for the pavlova, the yolk for the anglaise and the shell, cracked in half, can be used to serve the anglaise from as part of a distinct touch to silver service."

Born in Zimbabwe, Mr Wark's family left the country in 1980 upon the rise of the Mugagbe government. Arriving in South Africa at the age of 15, and not believing in the apartheid regime of that country, Mr Wark soon departed for England to take up his two year catering diploma at the prestigious City and Guilds in south west England. His education here included being one of ten apprentices selected to work aboard the Q.E.II during a world cruise.

"This was a fantastic opportunity for a young man. I got see such destinations as Durban, Kenya, Sri Lanka and throughout Asia and gained immense personal satisfaction in meeting the needs of guests from significant cultural diversity."

After a few senior and specialist chef positions which included Chamonix in France, the Crown Casino in Melbourne and the Marriot Hotel and Conrad

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" You need to experiment with different ingredients to arrive at a dish and flavour that separates your food from the usual "

Jupiters Casino at the Surfers Paradise, Mr Wark was enticed to Alice Springs to open up the new Convention Centre in the role of Executive Chef.

"Opportunities to open a new convention centre only come along in Australia every five years or so. It was one that I was not going to miss."

With his contract up at the Centre, Mr Wark decided to brave a new frontier for himself and take up teaching at the University's Alice Springs Campus.

"I wanted to stay in Alice as it is a unique domestic and international destination. The local food industry recognises this and benefits from a great Food Group."

The Group was started to bring suppliers and chefs together and network to work out how to better source or perhaps grow ingredients specific to the region rather than rely on interstate goods.

"This cooperative approach has realised better opportunities for both outlet and supplier as well as nurturing some cottage industries such as hydroponically grown ingredients like lettuces and micro greens.

"Change also keeps you hungry, so to speak, and it was a case of taking hold of another career opportunity but this time with a difference.

"When the position came up I thought it was a great time to share the skills I have gained from my experiences and train people regarding industry standards and expectations.

"While each role I have had has been different in terms of location, each has also been varied in terms of style whether it be in a la carte, banquets, 24 hour outlets, silver service restaurants, bars, etc. Variety brings with it the challenge to meet and exceed different customer expectations.

"This variety is also in my role at the University. We have a superb facility in the Desert Lantern Restaurant where as part of the hospitality team, I teach bars, butchery, restaurant and apprentices.

"We also have great fun with the three hour hobby type cooking classes we run every now and then."

"It's great to be encouraging people to recognise the assets they have and try to do something unique and wonderful with them." ↄ

Charles Darwin University's leading role in researching the impact of the invasion of cane toads in Northern Australia will be highlighted in a feature article by the world's leading scientific journal, Nature.

bracing for the unwelcome squatter

The international weekly magazine - the first media to break the 'Dolly the cloned sheep' story - sent one of its senior writers from the United Kingdom to interview ecologist Dr Barry Brook from the university's Key Centre for Tropical Research to talk about the ground-breaking work being done in the Northern Territory. It is the second time the hugely influential magazine has taken an interest in Dr Brook's work. It previously reported his paper on extinctions of species in Singapore (Nature vol 424, p 420).

Dr Brook, who is also receiving significant attention in the international scientific community for the co-authored paper The Uncertain Blitzkrieg of Pleistocene Megafauna (Journal of Biogeography, 2004), has been working in the field with the help of PhD students James Smith and Brooke Rankmore to monitor populations of selected species - mostly goanna - before the inevitable arrival of the cane toads.

The compelling and novel aspect of the research currently being undertaken by Brook and his team is that the focus is on collecting data pre-cane toad invasion. This has never been done before because when the cane toads (Bufo marinus) were introduced from Hawaii into Queensland sugar cane fields in the 1930s to combat the pest cane beetle, it was never contemplated the amphibians would become a biological terror that would kill just about any manner of wildlife, including fish, snakes, dogs and even freshwater crocodiles, that had the misfortune of biting into its highly toxic flesh.

Indeed, considering the toads were totally ineffective in the first instance because they couldn't jump high enough to eat the pest beetles normally found feeding at the top of sugar cane stalks, the introduction of the species was an unmitigated disaster from the outset - and one that has left a painful and enduring legacy as one the country's worst environmental disasters.

By the time scientists realised something was seriously wrong in Queensland, the seemingly indestructible cane toads with no natural predators to keep them in check had proliferated and already dramatically impacted on wildlife populations. This meant there was no base data to quantify the impact, no way of accurately assessing how wildlife populations had altered - that is until Dr Brook and his team started its monitoring project four years ago. It's a project that has transformed the Top End of the Northern Territory into a living laboratory.

"It is critical to have this baseline information pre-cane toad together with information when the toads actually arrive so we can work out what's going to happen long-term. This is the main emphasis of the field work. It's not a matter of trying to stop the toads arriving - we are too late for that - but, rather, being the first to document clearly and in a reasonable amount of detail the impact of a vertebrate invader in a continental setting," Dr Brook said.

The field work involves monitoring populations of selected species pre-cane toad at Adelaide River, Manton Dam and around Humpty Doo outside Darwin. The data is mostly collected from mangrove and freshwater goanna with the northern quoll also under observation.

"We are monitoring the demographics - how the populations operate, how the wildlife survive, and how they reproduce in the absence of cane toads. As this has been done over the last four years, we know in a fair bit of detail how the populations operate, and now cane toads are arriving (they are almost at Adelaide River, 110km south of Darwin) we will be able to monitor things like how the density changes," Dr Brook said.

"We have radio transmitters so we can find dead individuals and see whether they have ingested toads which will give us a better idea of idea of mortality rates."

Dr Brook, who is a specialist in analytical and computer simulation modelling for population ecology and risk assessment, said the data collected could be used to build a computer simulation model to see how populations operated.

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> "It's not a matter of trying to stop the toads arriving - we are too late for that - but, rather, being the first to document clearly and in a reasonable amount of detail the impact of such an invader in a continental setting"
>
> squatter

"This modelling has never been done for goanna. It will allow us to work out what impact cane toads are having on the mortality rate so we can make a more informed projection about what is likely to happen to the goanna population in the future with increased mortality and reduced densities," he said.

The status quo for now, Dr Brook said, was to wait, observe and record. While he readily accepts the cane toad will be a 'major problem' for Northern Australia, he nonetheless, maintains some optimism for the goanna.

"I think what is likely to happen is that there will be a depression in density, but probably no more than a local elimination of the population. They will be reduced a lot, but they won't become extinct and over time, as the goanna adapt through natural selection, they will recover but never to pre-toad numbers," he said.

"Some people expect the toad to have a greater impact than what might actually be the case. The population might be more resilient than people realise, so while they may not have a major impact on the mangrove goanna, they may have a substantial impact on the freshwater goanna - that's the point, we will wait and see."

Dr Brook said while people living in Darwin may only notice the impact of cane toads on wildlife to a negligible extent, that would not be the case for Indigenous people who use native wildlife such as snakes and goanna as a food resource.

"The main impact may well be on the Indigenous population because they use goanna as a resource. The goanna will be reduced substantially, so people will find them much more difficult to hunt and acquire and it will impact on their lifestyle," he said.

found found in the earth mound

Research into Indigenous earth mounds that are thousands of years old found in wetland environments in the Northern Territory have been the focus of a recent seminar series involving a select group of European universities.

Daryl Guse, an anthropologist with the Aboriginal Areas Protection Authority, presented the seminars which were based on his Charles Darwin University Masters studies undertaken in the Reynolds River region around Litchfield Park south of Darwin.

Planning to submit his thesis for his Masters of Aboriginal and Torres Strait Islander Studies early next year, Mr Guse said the focus of his research is the way that Aboriginal culture interacts with its environment rather than being determined by it.

“Work with the Werat Traditional Owners documented a suite of archaeological sites that demonstrate continuous occupation by Aboriginal people of the region during the last 10,000 years,” said Mr Guse.

The region is dominated by the sandstone plateau and escarpment of the Tabletop Range overlooking the extensive paperbark swamps and lagoons of the Reynolds River, with the coast only 60 kilometres to the west.

“The predominance of earth mound sites across this landscape has implications for our understanding of Aboriginal settlement patterns in the freshwater wetlands of north Australia.”

Earth mounds are about 30 to 40 metres in diameter by a metre or so high and have been built over thousands of years. They contain items like stone tools and remnants of a diet that included wallabies and turtles. They can also be a burial site for family members.

“Earth mounds occur in several of the wetland systems in the Territory and are still very much a part of the Aboriginal cultural landscape. They are a great connection with the past and the present but it is unusual that we find these mounds in such open regions.”

“While the archaeology of the region mirrors the massive changes that were occurring in the landscape and the ecology since the last ice age, the earth mounds show that as the wetlands grew in size the human population became more stable and complex.”

Mr Guse said that the opportunity to present his research in Europe was realised through some existing contacts with the University of Cambridge and also through contact, by chance, with a PhD student from the University of Aarhus in Denmark who is in the NT to study Indigenous tourism.

“Gauging from the reaction to my seminars there is a great deal of European interest in Australian Indigenous culture and heritage.”

Mr Guse presented seminars at the Departments of Anthropology and Archeology at the University of Cambridge, UK; University of Gothenburg, Sweden; University of Aarhus, Denmark; and University of Nijmegen, The Netherlands.

1131 thousand night of a thousand stars

NIGHT OF A THOUSAND STARS

More than 630 guests attended Charles Darwin University’s formal graduation ceremony at the Darwin Entertainment Centre during October where 229 graduands attended to receive formal recognition of successfully completing their studies.

In total, 1,131 people graduated from Charles Darwin University in October including 202 higher education graduands and 929 vocational education and training graduands.

The Ceremony featured Mr Roger Gibson, a Director with Price Waterhouse Cooper’s advisory and consulting business, who presented the Occasional Address to graduands.

Previously named as one of the top 100 Future leaders of Australia, Mr Gibson has been the Chair of MCC Welfare Services, a charity that works with disadvantaged

Image courtesy of NT News

people living with HIV/AIDS and is currently the chair of PACT Youth Theatre, the most awarded contemporary youth theatre company in Australia. He has co-led more than 15 leadership development courses for talented young people.

Mother of two, Melodie Bat - who received the Masters of Education (Honours) - provided the Graduand Response.

“For me, studying at Charles Darwin was highlighted by the genuine interest and assistance shown by lecturers and support staff and their understanding of the competing demands in my life,” said Ms Bat, who is a Lecturer in Education at the Batchelor Institute of Indigenous Tertiary Education.

“I have a real career, a real family and my study is a real part of my life. The University understood this and worked out a flexible approach so I could successfully complete my Masters,” Ms Bat explained.

Also attending the ceremony were Tiwi Island residents Aaron Sprigg and Brian Cerato who received the Certificate IV Assessment Workplace Training.

“Completing the course means more local residents are able to train fellow residents so that local skills needed for areas like tourism can be developed and expanded,” Mr Cerato, who is Transport Manager with Tiwi Islands Local Government, said.

“ The study also looks at the issues of how an athletic identity can play on the psychological well-being on the individual ”

What happens to an elite athlete’s identity in a form slump or at the end of a career? What happens when the praise and adulation comes to an end? How do athletes cope with being dropped? How do they cope with the sudden change of going from a ‘somebody’ to a ‘nobody’?

These are some of the questions being tackled by Charles Darwin University PhD psychology student Elizabeth Grylls.

Ms Grylls, 32, has interviewed 153 athletes from the amateur and professional ranks including AFL footballers, state netballers and 44 elite international competitors.

The working title of her thesis is ‘The Role Athletic Identity Plays on Australian Athletes’.

“I chose the topic of athletic identity because I kept reading newspaper articles, and hearing about athletes that were not the best player in the team or who were struggling to make the grade even though they had given up as much as the best player in the team, and yet they were always going to struggle,” Ms Grylls said.

“I wanted to know what happens to this player if he or she doesn't make it.”

“There are examples of athletes who struggle with their identities, including AFL footballers that make comebacks, athletes who take risks such as using banned substances (to sustain their identity) or training while injured.”

“I want to look at the athlete holistically and investigate the influence of athletic identity on Australian athletes, exploring the effect factors such as, age, nationality, personality, achievement, ability and social network has on an athlete’s identity.”

She said a further aim of the study is to examine the extent to which an athlete will try and maintain an athletic identity, through risk taking (banned substances), and continuing in sport either by extending their career or participating in an alternative role in the sporting area.

“The study also looks at the issues of how an athletic identity can play on the psychological well-being on the individual, after such factors as retirement, burnout, stress and injury, or de-listing from a club and non-selection come into play.”

Ms Grylls has a degree in human movement from the Royal Melbourne Institute of Technology. She has been a keen sport fan for as long as she can remember and currently works part-time as a tennis coach at the Darwin Tennis Centre.

It is expected the findings from Ms Grylls’ research will be applied in both a theoretical and applied perspective in the field of sport and exercise psychology, particularly in relation to elite Australian athletes.

“The benefits to these fields of psychology will be in the area of an athlete’s identity, and will generally be to those people who deal with these athletes, such as, coaches, managers, the social group of the athletes and also to the athlete themselves,” Ms Grylls said.

“It is hoped that the findings can help assist athletes from developing any psychological stress by ensuring that the athlete does not engage too much personal energy into developing and maintaining a strong and solitary identity.”

Ms Grylls expects to complete her thesis at the end of 2005.

island intervention

Research regarding a school-based intervention program to address suicide and other serious difficulties affecting Tiwi Islands children and their families has pointed to remarkably successful outcomes.

The Ngarlipirliga’ajirri Early Intervention Program has been supported by research headed up by Dr Gary Robinson from Charles Darwin University’s School for Social and Policy Research.

Ngarlipirliga’ajirri, meaning ‘helping each other to clear a path’

“According to teachers’ assessments, many of the children have shown marked improvements in behaviour. Parents have also indicated improvements in the family situations of their children as a result of the Program's encouragement of positive and assertive parenting strategies.”

The Program is run in conjunction with schools on Bathurst and Melville Islands, located 80 km north of Darwin, and the Tiwi Islands Health Services. The Tiwi Island Health Services team refer to the program as Ngarlipirliga’ajirri, meaning ‘helping each other to clear a path’.

Dr Robinson said that the measured results of Program's outcomes are encouraging and point to reductions in children’s problem behaviours and in parents’ anxiety. These improvements also appear to be sustained at the follow-up stage.

“If confirmed, these results will be highly significant indicators of what it is possible to achieve with well targeted programs in Indigenous settings.”

... adapting the program ... to local social and cultural circumstances.

The $790,000 Program - which has been jointly funded by the Commonwealth and Northern Territory governments, Beyond Blue and the Cooperative Research Centre for Aboriginal Health - was adapted from ‘Exploring Together’, a school-based parenting program for at risk children between the ages of 6-12 years. The adaptation of this program was an initiative of the former Tiwi Health Board.

“Children with conduct disorders or observed behavioural difficulty manifest in school or other settings are referred to the Program by teachers and family members,” explained Dr Robinson.

“Six to seven children, each with a parent or caregiver, attend the Program on a weekly basis for two hours for a school term. Evaluation of parents’ well-being and parenting and of children’s behaviour is conducted at the start and end of the term and again at a six month follow-up.”

Dr Robinson explained that the establishment of the program for the Tiwi Islands required adapting the program and research instruments to local social and cultural circumstances.

“Just as importantly, the program also needed the recruitment and training of indigenous staff. Their work with parents and children and their role in grounding the program in the local community context is central to its success.”

The current Program was completed recently with a final evaluation report of the Program due out before the end of 2004.

making life as a midwife

3800 babies born each year in the Northern Territory

babies

The Northern Territory's high birth rate presents midwifery students, Mandi Smith and Anika Bernau, with one of the busiest and most diverse training grounds in the country.

With a background as a palliative care nurse and a surgical nurse in Adelaide, Mandi Smith moved to the Territory three years ago in search of a sea change.

"I had always promised myself that I would go back and do postgraduate studies. Upon moving to the Territory I began work at Darwin Private Hospital and learnt that they were offering scholarships in the midwifery program - a career I hadn't contemplated previously," Ms Smith explained.

"I didn't get a scholarship but got a job on the ward where I have been for the past two years and decided to take up the Graduate Diploma of Midwifery at Charles Darwin University."

"I started out with the intention to complete the course full time during one year but became pregnant and changed my study to a part time basis. My son is now 10 months old and I am looking to complete the course in January 2005."

Ms Smith's classmate, Anika Bernau, moved to Darwin from Perth in January this year and began work in Darwin Private Hospital's maternity ward.

"I had been studying nursing in Western Australia since leaving secondary school and had always wanted to have a career in midwifery," Ms Bernau explained.

With her first child due in early 2005, Ms Bernau is completing the course on a full time basis and said that a career in midwifery offered many choices.

"It's a whole different specialty area to the rest of nursing and can also open up alternative career paths. If you wanted to work with the Royal Flying Doctor Service for example, you would need to have completed studies in midwifery," Ms Bernau remarked.

"For me, one of the great things about the course at Charles Darwin is the strong focus on Indigenous health encompassing cross cultural health - an area which is covered more extensively here than in other courses that I am aware of."

The Northern Territory has the highest birth rate of any Australian State or Territory with about 3,800 babies born each year. With about 700 births annually at the Darwin Private Hospital, both Ms Smith and Ms Bernau agree that the environment is a great place to work and learn.

continued>

"The Educator on the maternity ward is fantastic and given Darwin's multicultural mix, we also learn a lot from the other midwives we work with who come from a variety of different backgrounds."

The University's Midwifery Coordinator, Bev Turnbull, said that there have been more than 30 graduates from the Graduate Diploma in Midwifery since it began in 1999 and that there are about 20 students currently undertaking the course.

"Our nationally recognised course, which was introduced as the result of a community needs survey in 1999, has some distinct advantages and within the context of the current national shortage of midwives our graduates are finding employment readily," Ms Turnbull said.

Ms Turnbull said the course is designed to meet the needs of remote, rural and urban students and that the external nature of the program offered opportunities for students in other states who would otherwise not be able to access midwifery programs because of distance factors.

"As well as having students based in Darwin, Katherine and Alice Springs, about one third of our students are located in either South Australia, Tasmania, New South Wales or Queensland."

Further to the academic aspect of the course is a clinical placement component of 880 hours which is conducted in a variety of settings, both within health care facilities and in the community as a whole. Clinical placement is undertaken three days a week with a dedicated clinical educator based within the health care facility.

"Remote students come into either Darwin or Alice Springs for clinical practice, but can also undertake part of their practicum in areas such as Katherine or Gove. Given that clinical places are at a premium allover the country, interstate students can also undertake practicum in their own state where possible," Ms Turnbull explained.

"Unique to this course are remote clinical placement requirements where students are encouraged to work within an Aboriginal community to enhance the theoretical cross cultural learning."

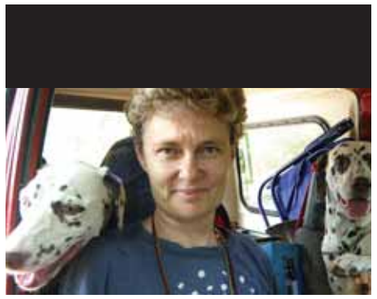
In the NT, remote clinical placements occur in cooperation with Territory Health and includes remote communities such as the Tiwi Islands, Galiwinku and Palumpa. This distinctive aspect of the course recognises that Indigenous births account for more than 40 per cent of newborn Territorians.

"With a strong Indigenous population in the Territory, the opportunity to learn from both health care professionals and community members in remote settings is of great value."

"Remote placement is a very unique cultural experience which is of undoubted value to the program learning outcomes," Ms Turnbull stated.

unspoken interactions.

“Change is part of the dynamic. The interactive dialogue is not as lively as it once was, so my work is also changing.”



The suburban use of a wasteland located on the edge of the Northern Territory capital has proven a successful muse for Charles Darwin University lecturer Bronwyn Wright.

The artist-photographer, and her two dalmatian dogs Coco Donut and Hot Chips, have a 14 year long association with The Swamp on the edge of Darwin’s northern suburbs. Her photographic work here has taken Ms Wright across Australia in a number of recent high profile exhibitions and competitions.

Earlier this year Ms Wright was one of only eleven artists to be invited to participate in the Australian Centre for Photography’s 30th Anniversary Exhibition, Zeitgeist. The graphic design lecturer was the only NT based artist to be participating in the Sydney based exhibition.

Her participation in Zeitgeist further develops Ms Wright’s reputation. In 2003, Ms Wright won first prize of $20,000 in the ENERGEX Arbour Contemporary Art Prize and earlier this year exhibited her works in the Adelaide Biennial of Australian Art.

“My work in The Swamp has links to the stealth associated with graffiti artists and the flamboyant play of the theatre. It is based on intimacy with the site, daily visits, observations of seasonal variations and an anonymous interaction or dialogue with a youth sub-culture.”

“For the young men and boys in the prime of their suburban warrior hood it’s a place to spin out in old cars, or stolen cars, 4WD's or on motorbikes.

“Plenty of active ‘circle work’ - donuts and burnouts are part of the energy of the Swamp. The Swamp is littered with the wreckages of disintegrating, abandoned cars. These blackened, crumpled metal bodies provide me with an opportunity.”

She takes a minimal approach to her own interventions in the Swamp, transforming abandoned car bodies, which she surreptitiously embellishes with spray-paint and other materials. The painted object, the car stays in the land and continues its own journey of transfor mation and decay.

“Revitalisation may take place through marks made by me or by persons unknown to me. The object, the site and human participators are constantly revitalised by the changing weather. This is process. This is the continuum.”

The photographic record reveals that through engagement with the car surface, she often finds, unexpectedly, rhythms and resonances with existing natural forms of the Swamp. continued>

This proves of great delight to her, as does the idea that the cars are not ‘waste’ but have an ongoing life as works of art with or without her involvement. Each of these cars she names, and records the changes to their surfaces and substance over time.

A vital dynamic of the Swamp as an arena for making art, is Bronwyn’s tenuous anonymity. Without any kind of personal exchange, indeed because there is none, Wright has managed to activate art gestures in the hoon observers connected to her own interventions in the site.

Unalloyed to any kind of conventional art context, the hoon’s play is evidence that the urge to alter and connect through art is unbounded.

“The response of the young guys to anything I do is raw, unknowing, innocent of the art world.”

The whole question of ‘knowing’ being deleterious to art seems like a contradiction, so grounded is art in the idea of communication.

However, in the case of the Swamp, as a shared arena for private agendas to interact, the art possibilities multiply exponentially in a context of open-endedness, in contrast to consciously shared collaborations which necessitates compromise.

Earlier in 2004 the NT government put up a hefty locked gate to the main entrance to the Swamp. Bronwyn has a key but the young men’s playful traffic has almost ceased.

“Change is part of the dynamic. The interactive dialogue is not as lively as it once was, so my work is also changing. I am making work from my huge archive of images taken in the Swamp over the last seven years.”

“My current work ‘Carscapes’ combines painting in acrylic on large canvases and silk screened photographic images. Recent digital experimentation involves low resolution mobile phone images and I am in the process of developing a new series of digital camera works that include the human figure as protagonist.”

uncertain blitzkrieg

It was a remarkable discovery and most unexpected: Two Charles Darwin University scientists working in the sweltering heat and humidity of Darwin develop a theory that presents a very plausible explanation and mathematical model to shed light on why the world's large animals became extinct.

The term used for these large animals is megafauna. Put simply, these are very big animals - gigantic bison, sabre-tooth tigers and beavers the size of grizzly bears. They disappeared and no scientific theory had been able to explain with any real authority why they became extinct. It was an enduring puzzle that provoked intense discussion from specialist and non-specialist alike for the better part of the last 150 years.

Finding out why the giant birds, reptiles and mammals became extinct in the late Pleistocene - about 10,000 years ago from the end of the Ice Age in North America, and about 45,000 years ago in Australia - is the holy grail of paleobiology. The debate between advocates of the two main theories - climate change and overkill by humans - can politely be described as robust. But while the climate change idea seemed less likely (negated by the fact many big animals survived the Ice Age), the overkill proposition remains volatile subject matter. Indeed, South Australia's Tim Flannery is routinely maligned for his seminal best-selling book The Future Eaters (1994) which argued that the arrival of humans in Australia had a profound and invidious impact, leading to rapid or 'blitzkrieg' mass extinction of species.

It is into this contentious field that Charles Darwin University's Professor David Bowman and Dr Barry Brooks have entered the fray to leave an indelible mark with their paper, The Uncertain Blitzkrieg of Pleistocene Megafauna (Journal of Biogeography, 2004). The pair published an earlier instalment of the theory in 2002 in the prestigious Proceedings of National Academy of Sciences of the United States journal, and they are awaiting peer review for the final and concluding paper to be published in Biology Letters, the British journal of the Royal Society. For Bowman, 46, and Brooks, 30, this is nothing short of a star turn before the international scientific community.

The theory, as Bowman explained, is simple.

"The theory of uncertain blitzkrieg is that we have been able to show a biologically plausible reason whereby wherever humans go, with whatever level of technology they can get their hands on, there will be a corresponding inevitable extinction of animals because of the capacity of humans to change the environment and outstrip the animals' capacity to adapt," he said.

"We have been able to provide a biologically plausible mechanism where previously, while it was said there was a coincidence of extinctions where humans go, it was never elaborated. We have been able to flesh out an ecological mechanism for this to happen. The blitzkrieg is that it happens fast and it's uncertain because extinctions can happen for a lot of different reasons, but humans are always in the mix."

Bowman and Brook looked at the profile of extinct animals and worked out individual body mass from skeletal remains. Over two years of painstaking research, they compiled literature from around the world, looking at the animals that had survived and those that had become extinct. These animals were then ranked according to increasing body mass. The findings convinced the pair there were onto something of considerable significance.

"What we saw was not a step, that is you got to a certain size and then you were dead - we know that's not true because elephants exist. What we saw was a really nice sweeping curve so the bigger the animal, the more likely it was to go extinct but there wasn't any threshold so little ones went extinct, medium ones went extinct, but more bigger ones went extinct. This was pretty exciting for us as it was a new piece of empirical evidence that we had discovered," Bowman said.

continued>

Brook, who is skilled in population modelling, and Bowman then created a computer model using complex mathematical algorithms so they could calibrate settings to see what inputs were needed to produce the empirical evidence they had before them. The problem they had is best exemplified by the analogy of a student given a basic arithmetic test. While the student might be told the end sum of the equation is, say for example, the number four, he or she then needs to decide the conceivable ways the number was arrived at - that is it could be a case of two plus two, or two multiplied by two, or one plus three and so on. On an infinitely larger scale, this is what Brook and Bowman did with their mathematical model. They knew the end profile of the dead animals; the computer model revealed the variations that could have come into play to produce such an outcome.

> "The impact of humans can result in major ramifications that echo through evolutionary times."

"We discovered there are many different ways to extinction - you can do it by over-hunting, being incredibly wasteful, destroying habitats with fire and making the animal populations whither, you could do it by fixating on big animals as trophies. There's a lot of different ways you can impact the capacity for the big animals to survive. There may have been some environmental disturbance, climate change, drought. There's a 101 ways you can do it - that's why it's called the uncertain blitzkrieg," Bowman said.

The point, now proved by Brook and Bowman, is that while humans alone were not necessarily solely to blame (or, indeed, conscious of what they were doing), the were a factor nonetheless when the extinctions took place. This work is unprecedented. In the context of the scientific argument and debate (including the attack on Flannery) that purports other factors - specifically excluding humans - were at play in the extinctions, the uncertain blitzkrieg theory is an iron-fisted rebuke. Flannery wasn't far off the mark - he just didn't have the empirical data and mathematical formula to silence his critics.

"While there are a number of scenarios where both humans and other factors came into play, there are no plausible scenarios where just other factors came into play and humans didn't play a role as other people have argued," Brook said.

"The mathematical models are based on quite sound biological principles. The model we used looks at the balance of uncertainties and gives you a probability of what happened. We can, therefore, verify humans did have a role in extinction which provides a more fundamental explanation of what happened."

The over-riding message, Brook and Bowman said, is that extinctions couldn't have occurred without the intervention of humans, and even if there were other factors that drove these extinctions, or influenced the rate or magnitude of the extinctions, "it remains an inescapable fact that it wouldn't have unfolded without humans being there".

The pair agree their theory supports the idea that human impact on the environment must be taken very seriously.

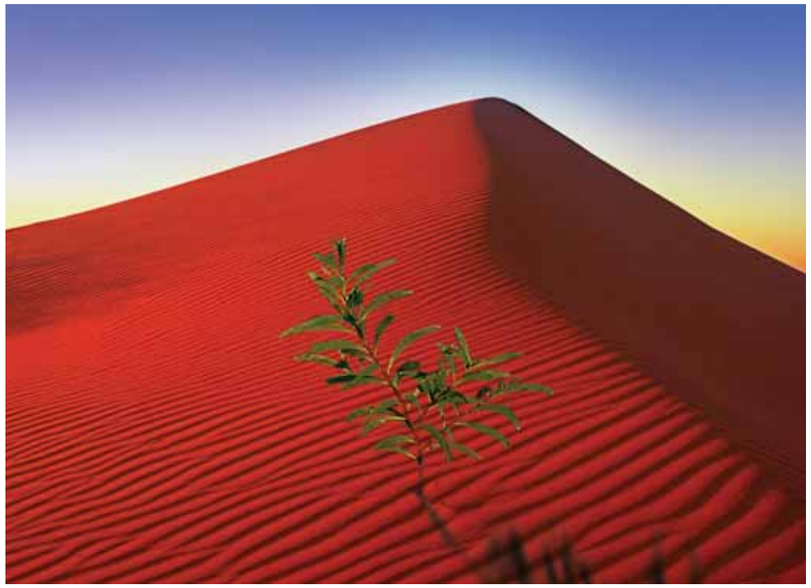
"The impact of humans can result in major ramifications that echo through evolutionary times. These great lineages of animals have been wiped out forever, and there are many more lineages of animals and plants that will soon also be wiped out for good," Brook said.

"The big animals," Bowman said, "are probably not going to make it in many environments now, because humans have more powerful technology - AK47s are a lot better than running around and killing an animal with a spear."

the living desert

living desert

FREE SYMPOSIUM: THE LIVING DESERT



The creation, ownership and use of knowledge sourced from the world's most strikingly beautiful landscapes heralded Charles Darwin University's second symposium for 2004: *The Living Desert*.

"The desert is a European idea, and is often equated with wilderness, a waste-land, no mans land," Symposium convenor and Charles Darwin University's Chair of Desert Knowledge, Professor Donna Craig explained.

"Yet the world's deserts are populated, some for tens of thousands of years, some by millions of people. They are culturally and environmentally rich places albeit with uncertain futures."

"In a globalising world, how should knowledge be used, owned, gathered and archived in desert regions? How can such knowledge help community development, cultural priorities and environmental protection?"

Held at Alice Springs' Araluen Centre, the symposium took place on 9 and 10 November.

Hosted by ABC journalist, Justin Murphy, *The Living Desert* attracted an exciting array of local, national and international speakers to discuss the important intellectual and institutional issues related to learning and research in desert regions.

Mr Sopan Joshi, from the Centre for Science and the Environment in India, presented international insights into building the knowledge economy with the world's desert regions. Mr Joshi is also Deputy Coordinator with the New Delhi publication *Down to Earth* which covers energy politics, Indigenous people, land and water management and agriculture.

Learning from the visions of great universities of the desert was the focus of Native American educator Octaviana Trujillo's presentation. A director of Applied Indigenous Studies at Northern Arizona University, Professor Trujillo has extensive experience in education program development for minority and multicultural populations - particularly Native Americans was the first woman to serve as chair of the Pascua Yaqui tribe in Arizona and has received fellowships from the Fulbright, Kellogg, Smithsonian and Rockefeller foundations.

Robynne Quiggin, a descendent of the Wiradjuri people from NSW, discussed valuing, understanding and protecting Indigenous knowledge. A former solicitor, Ms Quiggin is a law lecturer at the University of Technology Sydney, a researcher at Jumbunna Indigenous House of Learning and has a depth of experience in Indigenous intellectual and cultural property, genetic resources, bio-prospecting, micro-credit and banking in remote areas.

Alice Springs born Harold Furber provided focus on the meanings of university based on their historical evolution. A board member of the Desert Knowledge Cooperative Research Centre, he holds a varied background as an administrator and an educator in Indigenous issues. He has won many awards including a Central Australian of the Year NAIDOC Award.

More information on the speakers and the *Living Desert* program is available at: www.cdu.edu.au/cdss

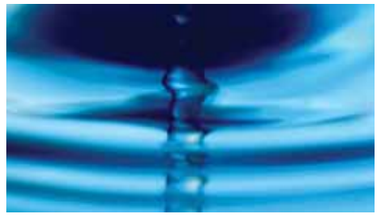
Looking ahead, next year's Charles Darwin Symposium at Alice Springs will be held between 20 - 22 September in the Araluen Centre under the title of *Imagining Childhood: Children, Culture and Our Community.*

Politicians increasingly talk about investing in human capital, and childhood has moved to the forefront of Australian domestic economic and social policy. Scientists and scholars are asking: Why is this intense interest in children arising now? What is the idea of intervention? What are the meanings of child development and family functioning in multicultural and postcolonial society? How do these become significant for families, for the sustainability of child-centred interventions and programs, and for research?

The 2005 Charles Darwin Symposium in Alice Springs wants to bring an international debate on childhood to the Northern Territory and invites the public, practitioners, policy-makers and intellectuals to engage closely with specialist scholars attending from the USA, UK and Australia.

water rights and values

water



"As water rights and management is in a period of flux in Australia, the situation for Indigenous people is unclear. There is a need to distil from International and National law, what are the actual responsibilities of governments and to see whether there is a generic way forward that suits the many Indigenous Nations within Australia," Chief Investigator and lecturer in resource management, Dr Naomi Rea, said.

"Concerns about water - whether it be poor water quality or supply, over use, desecration of sacred sites or lack of consultation - being expressed by Indigenous people and landowners are widespread across the Territory."

"It is now recognised that consideration of cultural issues with regard to water resource management has much room for improvement. This project is timely and can place cultural values, laws and rights into clearly articulated mechanisms that enable Indigenous people to express their views and wishes, engage in decision making and have improved autonomy over how surface and groundwater is used on traditional lands."

"This Project provides significant resources to Aboriginal people to do this," explained Lucas Jordan, a Research Associate with Charles Darwin University, who will spend the next three years working on the project following similar cultural heritage work on Cape York Peninsula.

"The first stage is a collaborative effort to establish what cultural values of water means to Indigenous people in the Anmatjere region and how they would like to participate in regional water issues," Dr Rea explained.

"Concurrently, an Indigenous Water Rights Report is being prepared that provides the formal backing for recognition of values. The second stage is a negotiation phase between all partners and government with the aim of instating cultural values of water and traditional and contemporary rights into institutional structures and Natural Resource Management procedures."

All Australian governments face a challenge to achieve water policy and management that accounts for regional social and cultural factors and meets international and national commitments and policy. Of the scattered work across the country about Indigenous connection to freshwaters, little was produced and approved by the custodians or traditional owners and little was used to build capacity or improve the outcome with regard to the management of freshwater.

As a consequence, a Charles Darwin University led team has commenced a $340,000 Commonwealth Government funded three-year project to explore how Indigenous water rights and values could be formally recognised. The majority of funds are from Land and Water Australia with the Desert Knowledge Cooperative Research Centre matching funds provided for the participation and training of Indigenous people.

The Project, which also involves the Centre for Environmental Law at Macquarie University, the Central Land Council, the Anmatjere Council and the Department of Infrastructure, Environment and Planning, is focused some 200km north of Alice Springs in the Anmatjere Region.

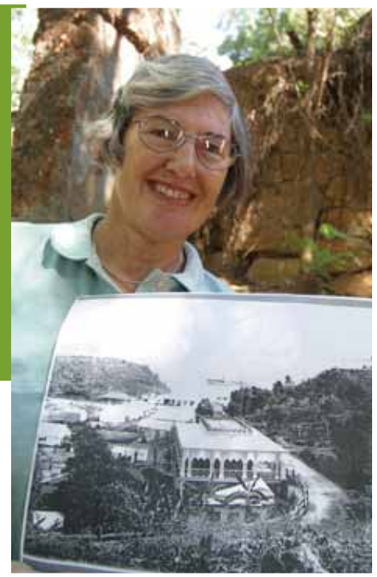
Irrigated agriculture is firmly established around the township of Ti-Tree and is slowly extending up and down the Stuart Highway. The 2002 Ti-Tree Water Management Strategy states that the cultural and environmental significance of ephemeral streams, swamps and waterholes are currently unknown and recommends surveys to determine these values as part of the management of water resources in the region.

water

As water rights and management is in a period of flux in Australia, the situation for Indigenous people is unclear.

knight's folly

knight's folly



An archaeological excavation of a grand Moorish style building designed by one of the Australia's leading 19th century architects is creating a history portal between the old Darwin CBD and the city's soon to be constructed $600 million dollar waterfront development.

Historical archaeologist postgraduate student, Julie Mastin, is excavating the site of the former home of Government Resident, John George Knight, as part of her Master of Arts degree at Charles Darwin University.

Knight, who arrived in Melbourne from England in 1852, designed a number of public buildings in Victoria including Melbourne's Parliament House, Melbourne Customs House and several other commercial buildings and many private houses.

In 1873, Knight relocated to Port Darwin and settled into a life of distinguished public service, holding a variety of government positions, the final one being that of Government Resident. He died in the Government Residence on 10 January 1892.

"Knight has been described as a remarkable man and designed many of early Darwin's - then Palmerston - culturally important buildings, including the Town Hall, Brown's Mart, the Infirmary of Fannie Bay Gaol, Court House, Police Station and the reconstruction of the Government Residence," Ms Mastin explained.

"He even constructed a fenced swimming pool at the end of Fort Hill that allowed for the high tidal fluctuations."

"The home he erected in Darwin in 1884 was below Government House and nestled against a cliff face with panoramic views of the waterfront. The house was known by different names - generally as 'Knight's Folly', the 'Mud Hut', or in correspondence from Knight himself, Mudville on the Sea."

The building was Darwin's first two-storey house, and its construction was possibly the first use of concrete in the Northern Territory - this is at a time when the Australian use of concrete in houses was at an embryonic stage. Knight was fascinated by building materials and had hoped that his home would eventually become a museum. The architectural style of his residence, reflected his knowledge of flow through ventilation, large verandahs to keep the inner core cool and the entire house painted white to reflect the sun.

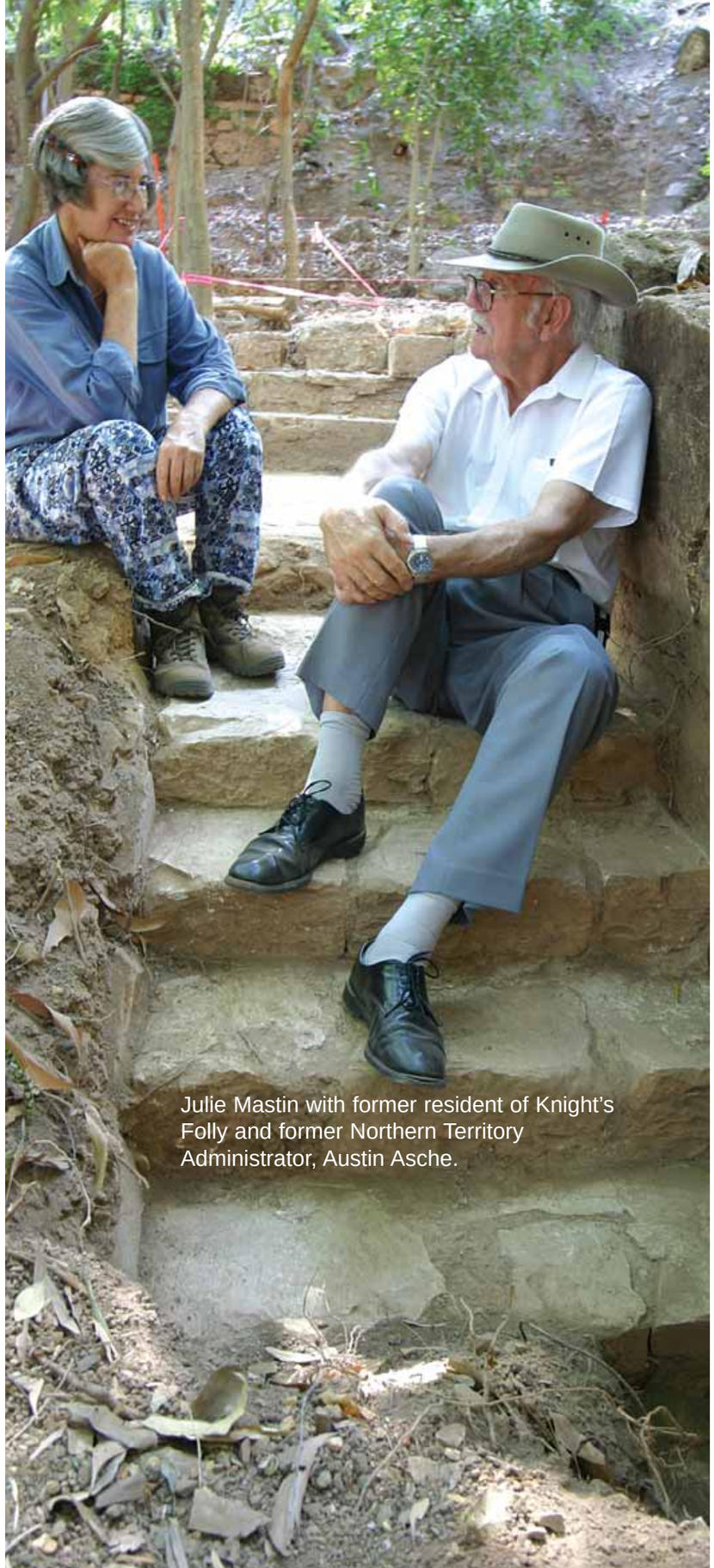
"He was referred to as an eccentric man, but he sounds to me, practical and innovative," Ms Mastin remarked.

Unfortunately Knight's house was destroyed by fire in 1933 with a second house constructed on the same site in 1938 which stood until devastated by Cyclone Tracy in 1974. This house, also two storeyed but smaller, was constructed of fibro cement with louvre windows and elevated on short concrete piers. During World War Two the house was requisitioned by the Navy and occupied from 1943 until 1960.

"This excavation is exciting as well as being frustrating. Knowing that two houses have occupied the same site, the amount of concrete slabs unearthed in such varying depths is a puzzle. The answer to the puzzle, is finding how to link these slabs to cover the known occupants that lived here."

One definitive known feature from Knight's home is the embedded pillar in the cliff face. This is verified from photographic evidence showing the pillar as a support part of the upper storey verandah that surrounded the house.

"Excitement mounted when we located two levels and also three steps constructed of roughly dressed porcellanite rocks. This masonry work there is unlike any other feature on the site, and writings of the time state that Knight used at least one local prisoner from the gaol skilled in masonry to construct his home." continued>



Julie Mastin with former resident of Knight's Folly and former Northern Territory Administrator, Austin Asche.

The hundreds of artefacts recovered so far offer evidence of the various site occupants but the most prolific material evidence relates to the second house.

"For example, numerous intact beer bottles, a naval button, 1940s coinage and a few bullets, hundreds of nails and other fastenings. Nineteenth century artefacts are infrequent, but locating two tiny opium bottles and a 19th century Minié bullet for a top end loading rifle were welcome finds," Ms Mastin explained.

Ms Mastin, who has undertaken similar historical excavations in the last seven years, wants the 'Knight's Folly' site to be left open for assessment and interpretation.

"It is a wonderful landscape that looks out upon Darwin Harbour. There are mature shady trees, sea breezes and an atmosphere that lends itself to having a picnic area for people to sit and learn something about the old Darwin."

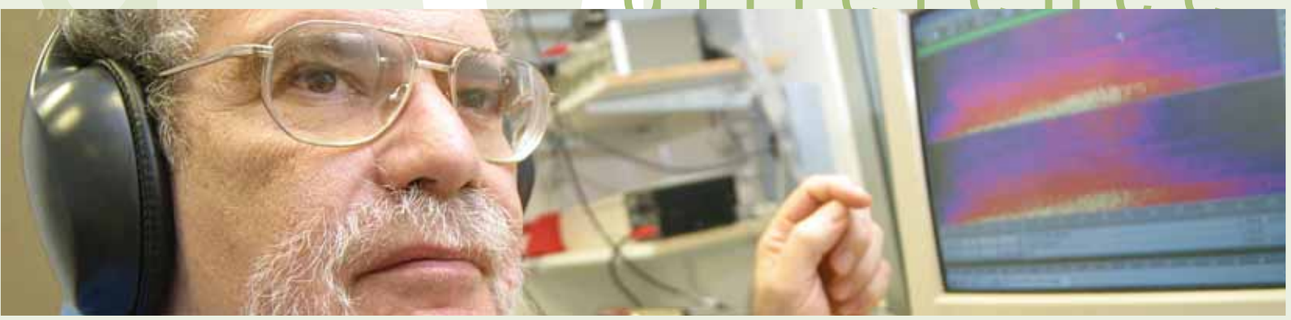
"It's going to be a wonderful thing for tourism - a link between Darwin's administrative centre and the new waterfront development. I want the site to be there for the people. This man did so much for Darwin and I'd like it to be retained as a memorial for him," she said.

As this excavation season nears completion, and the analysing of the artefacts begins, Ms Mastin is looking forward to the second archaeological season next year and to build on the features that have been located so far.

It is envisaged that after next year's excavation, all features will be left exposed, with interpretive signage installed which offers the visitor the opportunity to step back into the past.

"This is Northern Territory's history shaped by a man of vision."

detecting the difference



Making sense of the confused conversations of a suicide cult, the desperation of an emergency call and evaluating the authenticity of 'lost' recordings by the King of Rock and Roll or terrorist broadcasts can all be in a day's work for Dr Al Yonovitz.

Holding a doctorate in psychological acoustics, Dr Yonovitz is a psychology lecturer at Charles Darwin University and has been involved in the area of forensic audio and video for over 25 years.

Dr Yonovitz's involvement in forensic audio and video analyses was fortuitous. As a lecturer and associate professor at the University of Texas Medical School, he already had the academic background and credentials to analyse and testify about the forensic analyses of tape-recorded evidence. Various law enforcement agencies and criminal defence attorneys would seek his assistance in cases that had tape-recorded evidence. His 'big break' was a very high profile murder-for-hire case, after which he gained much attention to this unique area of the forensic sciences.

Since then he has been involved in the high profile David Koresh/Branch Davidian (Waco, Texas) criminal case and provided analysis of tape recordings for Fortune 500 companies including the Motorola Corporation, United Parcel Service, Inc. and Shell Oil Company. His work has also included various United States agencies, including the Federal Bureau of Investigation, the Drug Enforcement Administration, the U.S. Customs Service, the Internal Revenue Service and the Department of Alcohol, Tobacco and Firearms.

"Recent voice identification cases that I have been involved in include the authenticity and voices of the alleged Osama bin Laden audio recordings and, more gruesomely, the Islamic beheadings of American civilians captured on video and placed on the World Wide Web via Islamic websites," Dr Yonovitz remarked.

He explains that there is no 'typical' forensic case although some are more intriguing than others.

"In one recent criminal case a suspect left a message on the answering machine of the decedent. The voice on the answering machine was compared aurally and spectrographically with a known exemplar of the defendant. Such evidence was used to gain a first-degree murder conviction."

"In another criminal case, an informant was paid marked money to buy illicit drugs and surreptitiously tape record every transaction. However, the informant decided to go in cahoots with a friend, pocket the money, fake a transaction and implicate people that the two did not like. Subsequent arrests of innocent people sought to have their voices compared, as they knew they were not parties to those made-up transactions."

Dr Yonovitz got 'eliminations' of the exemplars - the defendants were not on the taped evidence. The court compelled Dr Yonovitz to send his data to the FBI and, before trial, the U.S. Government dismissed the entire case against all co-defendants.

"In another criminal case, a hotel room was rigged by local police to record both audio and video a drug transaction. But the buy and the video equipment went awry, as gunshots were exchanged between the undercover officers and the defendants."

"However, the acoustic percussions of the gunshots were incidentally recorded, and it was critical to know whether the defendants or the police officers fired the first shot."

Dr Yonovitz determined that because the defendant and the police officer had different calibre handguns - and hence yielding different acoustic ballistic signatures - then it was a matter of revealing the acoustics of each shot and matching it with the known gun.

continued>

"Thus it was determined not only who shot first, but the chronology of shots and how many time each shooter fired their gun, as well as the time between shots."

In that instance the defendant shot first and the threat of a criminal case against the police officers evaporated.

"In a civil case, a disgruntled employee surreptitiously recorded her employer. Not happy with the lack of incriminating evidence, the plaintiff tampered with the tape-recorded evidence. Dr Yonovitz produced a very damaging report (against the plaintiff), at which time the case settled and the trial was called off."

Other cases only involve tape-recorded evidence indirectly, as Dr Yonovitz also deals with linguistics, phonetics, acoustics, noise measurement and analysis.

"One case involved the authenticity of audio recordings alleged to be that of Elvis Presley. In addition to voice/speaker identification via singing, research and analyses of the old taped medium was helpful in the authenticity analyses."

Despite the exotic attraction of 'crime-busting', Dr Yonovitz believes that the challenge of a court case and establishing a scientific basis for truth is as exciting as an academic pursuit in applied or basic science.

At Charles Darwin University, Dr Yonovitz's primary research is in the area of providing the best possible hearing for Territorians with a focus into better hearing for both Indigenous and non-Indigenous Australians.

As a clinical audiologist as well, he continues to inform about the difficulties children and adults experience with hearing impairment. His research with Indigenous children has inspired a key element within the NT Department of Employment, Education and Training Literacy and Numeracy Strategy.

"It is tragic how the consequences of this hearing loss affect the personal, social and educational potential for so many children in the Territory."

"Indigenous Australians have the highest incidence of hearing loss compared to any other population. On Bathurst Island more than 50 per cent of the children have actively draining ears with consequent hearing impairment as well. Enough hearing loss so that hearing their friends, their family members and their teachers is nearly impossible."

"Our Indigenous population comprises 28 percent of the Territory and owns over 50 percent of the land and yet we face this nexus in health and education from a country that inspired the world with the bionic ear."

His research and teaching includes working as the Unit Head in Ear Health and Education at the Menzies School of Health Research and the District Manager for Australian Hearing.

Interestingly, his credits also include having mentored the first African American Astronaut to 'walk in space'.

"Like many students that I am mentoring at the Charles Darwin University, Bernard walked into our hearing research laboratory in Houston, Texas as a second year University student interested in hearing science."

"Bernard needed a job and a friend as well and the funds raised from a few acoustic forensic cases paid for Bernard's work eventually led to significant publications in hearing aid studies."

When Dr Yonovitz came to Australia for work in Indigenous hearing they lost touch until their friendship was reunited with an e-mail:

"Recent voice identification cases that I have been involved in include the authenticity and voices of the alleged Osama bin Laden audio recordings..."

To: Al Yonovitz,

…Well, you missed (as you were in Australia) my graduation from medical school, my research fellowship at the NRC, and my two space flights and walks. BUT, I have always wanted to tell you how important those years in your lab and your friendship has meant to me. In fact, you are part of the equation for my success...and I THANK YOU! I hope that we can get together some time in the near future. Besides, I think I owe you some money (from my poor college student days)…

Bernard Harris

After flying his inaugural space mission in 1993, Dr Harris flew as payload commander for the first flight of the joint Russian-American program in 1995. During this mission, he visited the Mir space station, conducted more extensive research on humans in space and conducted a five-hour space walk outside the shuttle Discovery thus becoming the first African-American to walk in space.

"I hope that at some stage in the near future that Bernard can visit Australia and, through the work I do in remote Indigenous communities, we can both realise a dream of helping to inspire Indigenous and non Indigenous youth about the possibilities that life can hold," Dr Yonovitz said.

Photo courtesy Scabies Laboratory, Menzies School of Health Research

the good oil

Tea Tree oil is being used as an effective treatment for people suffering severe scabies at Royal Darwin Hospital as a result of research undertaken at Menzies School of Health Research - a Research School in Charles Darwin University's Institute of Advanced Studies.

Laboratory studies found tea tree oil to be highly effective in killing the scabies mite, leading researchers to believe it may help the problem of the mite's increasing tolerance to current standard treatments.

Up to 60 per cent of children in remote Aboriginal communities in northern and central Australia are infected with scabies - a skin disease caused by a tiny burrowing mite. It is further estimated 300 million people worldwide suffer from scabies at any one time.

Scabies causes intense itching, resulting in skin damage through scratching. These sores often become infected with secondary bacterial infections which can lead to life threatening illnesses such as kidney and heart disease. Some remote communities in the Northern Territory have the highest rates of kidney and heart disease in the world.

Preventing the spread of scabies has now become a priority for many communities. Successful community based 'healthy skin' programs involving mass treatment of all residents with permethrin has been introduced in a bid to reduce the prevalence of scabies.

Dr Shelley Walton from the Menzies Scabies Laboratory says there are only a few effective treatments for scabies, and it's feared the scabies mite, like head lice, will become highly resistant to them.

"We have evidence of increasing tolerance of the scabies mites to permethrin, the current treatment used in community control programs, over the last five years. We have also recently reported the first evidence of resistance to oral ivermectin. This is of great concern as ivermectin is the treatment of choice for crusted scabies, a very severe and debilitating form of the disease."

"With limited effective drugs available for the treatment of scabies, it is important to avoid the development of drug resistance in scabies mites," she said.

"In order to extend the effective life of the available treatments, we've been looking for alternative therapies to complement the existing drugs, and laboratory studies show tea tree oil to be an effective treatment," she said.

Dr Walton and the Scabies lab team are now extending their studies to identify the scabies mite genes involved in the development of resistance to existing treatments. It is hoped their work will help avoid the current global problems of resistance to treatment observed in other organisms such as head lice.

new roost

A $2 million Northern Territory Government grant is funding the new home ground for the Palmerston Magpies football team at Charles Darwin University's Palmerston Campus.

The grant forms the basis for a partnership between Palmerston's Australian Rules Football team - which plays in the NT Football League - and the University.

"Partnerships such as this are the way of the future for the development of sports facilities in the Territory," NT Minister for Sport and Recreation, John Ah Kit, said.

"It gives greater economies of scale and greater capacity to leverage improvements and expansion through joint construction projects, volunteer and sponsorship commitments. Other sporting groups in the Palmerston area, as well as students from the University's Palmerston campus will all be beneficiaries."

Vice Chancellor Professor Helen Garnett said that the partnership was an important step forward for the Palmerston campus.

"For the students at the Palmerston campus, it will mean greatly enhanced access to a good sports ground-it is something that will be available to other sporting groups in the city of Palmerston. We have undertaken consultations with the surrounding community to ensure that the new developments will harmonise with community expectations."

"We will also continue to work closely with the Palmerston Magpies in developing detailed plans for improvements to what will be a joint venture between the Palmerston Magpies and the University."

The funding will go to the University, which is committed to expanding sporting facilities for students on the Palmerston campus. It is expected the $2 million will go a long way towards priorities such as providing improvements to the oval, and the construction of a fence, scoreboard, change rooms and kiosk, as well as car parking and limited spectator facilities.

putting practice into study

A new virtual reality based learning environment focused on the travel industry has been opened at Charles Darwin University's Palmerston Campus.

The Travel Gateway Practice Firm is a simulated business environment where Charles Darwin University business and tourism students 'virtually' sell travel packages to the Northern Territory and Borneo as well as Royal Brunei airfares. The practice firm is a result of a newly forged partnership between Charles Darwin University and Northern Gateway Pty Ltd.

"Tourism is one of the Territory's biggest industries," Northern Gateway Chief Executive Officer, Penni Tastula, said. "Reality based training for students is a fantastic opportunity for us to help grow the professionalism, capacity and reputation of the Territory's travel industry into the future."

The Practice Firm is a learning centre where students can complete a Certificate one and two in Business and Certificate three and four in tourism. The University's School of Tourism and Hospitality is headquartered at the Palmerston Campus.

"It's the ultimate learning environment where theory meets practice," Head of the University's School of Tourism and Hospitality, Morag McGrath, stated. "In addition to learning how to run a business from a textbook or conventional classroom, students run a virtual business."

"While no money or products are actually exchanged, the students market and sell travel products, keep accounts, negotiate contracts and post profit and loss statements in a virtual environment that reflects the actual business operations of Northern Gateway. The students make hard business decisions and are paid virtual salaries. They will also learn other important skills like work and business ethics, skills that might otherwise sound very abstract coming out of a text book," Ms McGrath remarked.

The Travel Gateway Practice Firm complements the highly acclaimed Crocodylus World Practice Firm that has operated at the University's Casuarina Campus for the past seven years. A partnership between the University and Crocodylus Park, the Crocodylus World Practice firm was recognised with a Judges' Encouragement Award during the Prime Minister's Awards for Excellence in Community and Business Partnerships this year.

>directions

Herbert Howell
Graduating in 1999 with studies in Teaching English to Speakers of other Languages from Charles Darwin University, I spent the rest of the year at Warburton Ranges, a remote Indigenous community in Western Australia's Gibson Desert which had been my home since the 1960s.

When the year was completed my wife and I shifted to Esperance where I took up a teaching position in a non-government all Indigenous school. Wongutha CAPS is a Vocational Education and Training school for years 11 and 12 students most of whom come from the Kimberley region with several coming from the Eastern Goldfields, the Pilbara and a small number from the WA's south west. I teach a Scaffolding literacy program (known as Accelerated Literacy in the NT) as our students are all English as a Second Language speakers and most have very low literacy levels.

It is very encouraging to have students increase their literacy levels, in some cases dramatically, as they are all in their last years of school and are considered 'at risk'. I really appreciated the studies I completed in Darwin and have now commenced a Masters in Applied Linguistics and trust this will also help the students at the school in the long run.

Charleston Wang
I completed my LLM in Comparative Law from Charles Darwin University in May 2002. I chose the University because of its unique program in South East Asian Law which includes the Islamic law of the region. I earned my first law degree, a Juris Doctor from the Salmon P. Chase College of Law, Northern Kentucky University in 1982. I also hold a MBA in International Business from Xavier University in Cincinnati, Ohio (1979).

Since graduation, I have continued to practice U.S. immigration law and am admitted before the Federal and Ohio state bars. Given the turbulence in the world, immigration law gives me little rest and great challenge, especially in the areas of Asylum and the Torture Convention. My practice allows me the opportunity to professionally compare the human right conditions in various parts of the world and to use U.S. immigration law to help people escape persecution and torture. The comparative law study at Charles Darwin certainly has improved my ability to help my clients for which I am grateful.

I now live in Cincinnati with my wife, Shirley, and we are the proud parents of Vivian, 21 who studies at Stanford University, and Arthur, 17 who attends Sycamore High School in Cincinnati.

Grace Fombad
As a 45 year old medical doctor (G.P), I completed a Master of Public Health with Charles Darwin University's Menzies School of Health Research this year. My choice of Charles Darwin was influenced by the fact that they offered mixed mode of studies which allowed me to work and pay for my course and ultimately, my studies have allowed me to expand my continued interest in and contributions to the United Nations.

Married with four children, I have served as MD in my home country of Cameroon for 14 years and also as a UN Volunteer medical doctor in Timor Leste for 23 months. For the past three months I have been working with the UN peace keeping force in Sierra Leone, a place of current conflict but also great hope, where I am currently serving in the capacity of Medical Officer and administratively assisting the Chief Medical Officer in his absence. Already, we have had to live through an outbreak of Cholera and Lassa fever.

With the United Nations I have the opportunity to assist those who have gone through periods of agony and are in need. I treat local staff working with the UN while living under the same conditions they do and with my salary, I sometimes go into the communities for philanthropic activities. For example, in Timor Leste we, the volunteers, organised clean up campaigns and provided trash bins for the streets and also bedding for the maternity ward of the national hospital. We also organised monthly consultations and feeding for one of the many orphanages in the country.

Vince Champion
At age 30 I decided to return to school. As I hadn't completed year 12, I needed to do a tertiary bridging program and was very thankful I had completed that course prior to doing degree studies as it prepared me brilliantly for what was to come. The skills I learned during that one semester made the subsequent six years of study more enjoyable, less stressful, and more successful. I completed a BA in 1999 majoring in anthropology with a double in psychology.

I gained employment as a psychiatric rehabilitation worker with TEAM Health. This community based mental health organisation were very supportive of me undertaking further studies and I undertook and completed Psychology Honours in 2000.

Clinical staff at TEAM Health are fortunate to receive clinical supervision from a senior psychologist at Top End Mental Health Services (TEMHS). It was therefore easy for me to adapt that work supervision to the formal two year supervision required to complete my registration as a psychologist with the NT Health Board, which occurred in 2003.

I am now the psychologist to the 'Adult Team' at TEMHS outpatient clinic at the Tamarind Centre - a job which I love and which allows me to further develop my skills. I provide psychological intervention into a broad range of mental health issues as well as clinical input into the psychiatric inpatient unit at the hospital. I plan on one day undertaking a Masters in psychology on an external basis to complete my registration with the Australian Psychologists Association. continued>

Jill Byrnes
Completing a Master of Development Management at the University in 1993, I established a management consulting business, specialising in non-profit, community-based organisations. I moved to Kununurra in 1994 and continued the consulting business there for nine years, gaining a great deal of experience with Indigenous organisations and government departments.

My work includes community development facilitation, corporate governance training and facilitation, strategic planning, conducting consultations on behalf of government departments, preparing culturally appropriate training/information materials, and writing funding submissions and annual reports. Last year I moved to the Hervey Bay area of Queensland, and have continued the consultancy business which I find very rewarding and worthwhile. ↻

LEFT - RIGHT
Herbert Howell
Charleston Wang
Grace Fombad (far right)
Vince Champion
Jill Byrnes (back row, far right)

indigenous health research boosted

boosted research

indigenous health research boosted

A research team led by Professor Kerin O'Dea, Director of the Menzies School of Health Research (MSHR) has been awarded over $7 million over five years to address the serious health problem of diabetes, kidney and heart disease in Indigenous people.

The prestigious program grant, funded by Australia's National Health and Medical Research Council (NHMRC), is the biggest ever grant awarded to MSHR, a research school in Charles Darwin University's Institute of Advanced Studies.

Professor Kerin O'Dea said the program will pull together leading Australian research teams in diabetes and renal disease among Indigenous Australian populations in a collaboration between Menzies School of Health Research, University of Queensland and the University of Melbourne.

"We have assembled a multidisciplinary team of experienced and talented researchers with strong and diverse backgrounds in Indigenous health in an effort to reduce the impact of chronic diseases occurring in epidemic proportions among Indigenous Australians."

"The program will focus on diabetes, kidney and heart disease all of which occur at a much higher prevalence and earlier age of onset among Torres Strait Islander and Aboriginal people than among the broader Australian population," she said.

Relative to the overall Australian population, Indigenous Australians have 15 - 20 years shorter life expectancy. Diabetes and related conditions, such as heart disease and kidney disease, are major contributors to this reduced longevity.

Disturbing statistics reveal Indigenous people experience up to four times greater prevalence of cardiovascular disease, more than 10 times the prevalence of diabetes in the 20 - 50 year age group, and develop end-stage renal disease at up to 30 times the rate of non-Indigenous people.

While these chronic diseases are known to cause suffering and premature death in Aboriginal and Torres Strait Islander communities, there remain knowledge gaps. For example, little is known about how these conditions develop over time in different populations. Probably the greatest knowledge gap is in the area of effective interventions - both to prevent diabetes, kidney and heart disease in young people, and to treat existing cases effectively.

According to Professor O'Dea, the aim of the research is to better understand the development of chronic disease across the lifespan, and to guide the development of diet, lifestyle and clinical interventions.

"Our research will continue to study patterns of disease and seek to identify major determinants and casual pathways to chronic disease in Indigenous populations from many communities and regions across three states and territories."

indigenous health

"We will also be looking at the most effective community based interventions - both to prevent diabetes, kidney and heart disease in young people, and to treat existing cases effectively. Most importantly, these interventions need to be simple, effective, acceptable to Indigenous people and sustainable over the long term."

"We are hoping the results of our research will inform policies in areas such as quality and affordability of the food supply in remote communities; infrastructure to promote physical activity; and provision of high quality primary health care focussing on early intervention and care of people at risk of chronic disease," she said. ↻

art matters

Anita Angel has dedicated most of 2004 to discovering, cataloguing and assessing many of the 1200-plus art works that comprise one of the Northern Territory's most significant art collections.

Appointed Curator of Charles Darwin University's permanent art collection in February, Ms Angel was confronted with a collection that was fairly scattered, its scope and depth little known in the Northern Territory and beyond.

"Established as a 'University Collection' in 1989, it drew together the disparate collections of the University's precursor institutions: the University College of the Northern Territory, the Darwin Institute of Technology and the Darwin Community College," Ms Angel explained.

In late 2003, management of the collection became the responsibility of the University's Northern Editions Printmaking Studio - the largest publisher of Indigenous prints in Australia - and, shortly afterwards, the University's Vice-Chancellor, Professor Helen Garnett, accepted the role of Patron.

Ms Angel, who is currently completing her doctorate in Art History and North Australian History at Charles Darwin University, said that with re-assessment of the collection well underway, the collection is gaining increased notice.

"Many art works, formerly in storage, have now been displayed throughout the University's Casuarina Campus, with plans for other works to be re-hung at the Palmerston Campus and displayed in Alice Springs, as well as other campuses of the University. A number of art works are also currently on temporary loan to Government House in Darwin."

The Collection comprises approximately 200 paintings, works on paper, sculptures, ceramics and a number of textiles and mixed-media works by non-Indigenous Australian and South East Asian artists. There is also a small collection of early Indigenous bark paintings, sculptures and artefacts, contemporary Indigenous paintings and works on paper as well as a significant archive of more than 1000 limited edition prints by Australian Indigenous and several South East Asian artists produced at Northern Editions and its predecessor print making studio workshops from 1993 to the present.

Ms Angel said that future acquisitions to the collection are assured, via the generous on-going donation of workshop proofs of limited edition prints from Northern Editions.

"In recognition of the collection's importance to both the University and the broader community, the University Foundation recently sponsored the acquisition of two significant paintings by Pintupi artists Bobby West Tjupurrula and George Ward Tjungurrayi, represented by Papunya Tula Artists Pty Ltd, Alice Springs. George Ward Tjungurrayi was the recipient of the Wynne Prize for landscape art this year at the Art Gallery of New South Wales."

Other recent acquisitions include three woven fish-traps and a stunning fibre fish fence by artists from Maningrida Arts and Culture, and a fine painting by Fiona Sivyer, a promising artist and post-graduate student in the University's School of Fine Art and Design. continued>

"Earlier this year, in March 2004, another important acquisition was made of a painting by Franck Gohier - a Darwin-based artist and printmaker. It is not only visually compelling, but represents an historic link with Northern Editions."

Created in December 2003, *Falling the way flowers do, to die an honourable death*, (as shown on page 1) is a powerfully resolved work in acrylic on aluminium pop rivet, inspired by the artist's interest in the hidden history of war. Mr Gohier said he was intrigued by the fact that 'civilisation' and the development of the humanities usually arise from an affluent culture where its people are strong and secure. This position of advantage is usually achieved via politics, economics and war. He said that the Japanese, during World War II, called their pilots who died in combat 'Falling Chrysanthemums'.

"In this painting, I was trying to capture the poetic side of humanity, even in war. It is a homage to all men and women in the world who have an artistic and poetic element in their nature, people who have arrived from all the great civilisations and cultural backgrounds that history has recorded - the same people who, ironically, can also be so brutal and merciless when the call arises," Mr Gohier explained.

French born Gohier graduated with a BA (Fine Arts, majoring in printmaking) from this University in 1991, where he also worked as a studio printmaker/lecturer between 1993-96.

During this time, Mr Gohier co-founded (along with Leon Stainer and George Watts) a series of ground-breaking printmaking workshops involving Indigenous artists from remote communities throughout the Top End and Desert regions of North Australia.

"The important links forged by this team of printmakers, between the University and several key Indigenous art communities, formed the foundation of Northern Editions Printmaking Studio, recently described by former Chancellor Nan Giese as 'the jewel in the crown' of Charles Darwin University," Ms Angel explained.

In 1997, Mr Gohier co-founded Red Hand Print Studio together with Shaun Poustie, an ideologically radical and independently spirited venture, which continued Gohier's involvement with the tuition of printmaking skills to Indigenous communities, later extending this to prisoners at Berrimah Jail.

In April 2004, the Charles Darwin University Art Collection acquired, by donation from the artist, 79 poster prints by Mr Gohier dating from 1997-2002, emanating from the pioneering printmaking studio of Red Hand.

"They comprise a significant component of the University's holdings of locally-inspired prints and posters, alongside a considerable range of other art works by Gohier, either as principal artist or printer/collaborator at the University Printmaking Studio."

With temporary exhibitions from the collection having already been staged during 2004 in conjunction with University events, future exhibitions on highlights of the collection are planned and promise to provide important insights into the University, the Northern Territory and the region in which we interact.

art matters

LEFT
Painting by George Ward Tjungurrayi (2004)

BELOW
Large fish trap by Jack Marnbarra (2004); two small fish traps by Bonnie Burarn.garra (2004)

indigenous future stockmen

The shipping yards in the small Northern Territory town of Elliott, located half way between Katherine and Tennant Creek, were the focus of a busy two weeks when a group of nine Indigenous students, including two future stockwomen, began training under the tutelage of lecturers from Charles Darwin University's Northern Territory Rural College and local Indigenous stockmen.

"Organised through the efforts of many, the training was particularly successful," Director of the Katherine located Rural College, Dr Brian Heim said.

Potential jackaroos and jillaroos are often frustrated by a lack of basic level skills that are needed to gain employment on a cattle property in the Top End and stations are often unable to train new employees in basic skills such as horse riding because of the busy mustering schedule. Added to this, safety concerns for unskilled riders prevent them from hiring people who may be keen to work but have never had the opportunity to gain proficiency in these most basic requirements.

"Due to this vicious cycle, stations such as Newcastle Waters and Hayfield encouraged the Rural College to deliver this training and offered to take on some of the students when they gain basic competency," Dr Heim explained.

Though it took some time to get the project off and running, the results were well worth the efforts. Strongly promoted by local training consultant David Green, the project took on a life of its own and eventually included assistance from the Elliott community, the NT Department of Business, Industry and Resource Development, Newcastle Waters Station and Consolidated Pastoral Company, Hayfield Station and many community volunteers and helpers.

The project is just the start of what is expected to be a tremendously successful program across the Territory. Conducted over a two-week period, the students started their first week learning the basics of horsemanship under the guidance of Rural College lecturer Sam Tapp and Alister Trier from DBIRD. As the week progressed, they moved out of the confines of the shipping yards in Elliot and into the bush for more adventurous riding and experience.

In the second week, the students were led by Rural College lecturer Alison Haines who was assisted by well-known Territorian Bill Fordham. As would be expected, each of the students began showing talents in various areas. After gaining confidence in their riding skills, some of the students showed real promise in horseshoeing while others began developing and perfecting their skills in marking cattle. The students were given the opportunity to travel to nearby Newcastle Waters for some on-the-job training and skill building. They were engaged in basic station skills including mustering/walking cows and calves, marking, branding, tailing weaners, and fence repair. All of the students loved the practical work experience and profited from the exposure to real-life work.

"After the two weeks were over, the students expressed a desire to come to the Rural College for more training as well as participate in further offerings in the Elliott community. A trip up the Stuart Highway to the College in Katherine is being scheduled for the near future and work is also commencing to develop further opportunities for training in Elliott and in other remote locations."

Plans are being laid for more training in rural production and also in areas such as business, computer information systems, automotive and small engine repair, and other areas through Charles Darwin's Katherine Regional Centre in concert with the Rural College. These opportunities are being extended into other remote locations including Lajamanu, Beswick, Hodgson Downs, Timber Creek and Barunga.

"We have a tremendous opportunity to offer training in numerous areas not only limited to rural production," Dr Heim said.

"Collaborative efforts involving the University, relevant NT government departments and community groups result in a win for all parties, most especially at-risk youths who desperately need the chance to develop a lifelong skill."

"We look forward to continuing and expanding these programs and thank all of the participants and supporters who have made this become a reality."