Climate change did not cause giant kangaroo’s extinction

The long-running debate over what drove most of the world’s Ice Age megafauna to extinction has taken a dramatic turn with new research published in the Proceedings of the National Academy of Sciences USA.

The findings of an international team of researchers, led by Flinders palaeontologist Dr Gavin Prideaux, suggest human hunting caused the extinction of the largest kangaroo ever to evolve.

Dr Prideaux said the most detailed study yet made of the dietary habits of an extinct marsupial suggest that neither a drying climate nor firing of vegetation by humans drove the extinction of the largest kangaroo ever to evolve, the 2 metre, 230 kilogram short-faced Procoptodon goliah.

“Opinions have been divided between the importance of increasing aridity and landscape burning or hunting by humans, who arrived in Australia around 50,000 years ago,” Dr Prideaux said.

“Our research confirms the giant kangaroo fed mostly on saltbushes that were widely available, thrive in dry conditions and form stands that don’t carry fire well,” he said.

“We also established that the giant kangaroo needed to drink more regularly than its grazing contemporaries, and yet it disappeared during a period wetter than others it had survived previously.
An interviewing method that capitalises on eyewitnesses’ confidence in what they observed at a crime scene has the potential to increase significantly the amount of accurate testimonial detail obtained from witnesses during criminal investigations, according to Flinders University psychologist Professor Neil Brewer.

The method utilises eyewitness assessments of confidence in either general or more detailed versions of their responses to questions about crime-related events.

The interview technique, in which police could be trained, would demand two sets of answers to each question asked, with 'fine grain' questions requiring specific detail, and 'coarse grain' a more general answer. The witness would also indicate how confident they were about each answer.

Pilot research has shown that when confidence is high, the additional information “forcibly” elicited by closed questioning is no less accurate than information reported in an open or free recall interview – but the amount of information elicited appears to be much greater.

Professor Brewer said research has major implications for how police should interview witnesses to gain as much accurate and reliable information as possible.

“Eyewitness evidence is crucial in identifying the guilty and also in ensuring that innocent people do not become mistakenly blamed,” he said.

Professor Brewer – an international expert in eyewitness accuracy and its impact on legal trials – is one of only two researchers to win funding through the Australian Research Council’s Linkage International Social Sciences funding pool.

Professor Brewer and British research partners Dr Fiona Gabbert and Dr Lorraine Hope won $152,000 from the Australian Research Council and similar funding from the UK to fund research into a new interviewing method that could overhaul the approach currently recommended in most Western police jurisdictions.

Professor Brewer said the proposed method is radically different from the “cognitive interview” or open-ended questioning approach currently recommended internationally for police officers.

“By playing down the roles of aridity and landscape burning, we refocus attention again on human hunting as a more likely extinction cause.”

The team, which included researchers from the Australian National University and Utah, Vanderbilt and East Tennessee State Universities in the US, studied the anatomy of a Procoptodon goliah skeleton, as well as microscopic scratches on teeth, and oxygen and carbon isotopes contained in tooth enamel.

They believe that as the largest ever hopping animal, the giant kangaroo would have been slower to accelerate from a standing start than other kangaroos making it more vulnerable to hunting by humans as the giant kangaroos ventured to waterholes to drink.

Australia, which was once home to rhinoceros-sized herbivores, marsupial ‘lions’ and giant lizards, suffered the worst extinctions of all the continents, losing 90 per cent of larger species by 40,000 years ago.

The research project was supported by the US National Science Foundation and the Australian Research Council.

Vincent Ciccarello

Cover image: Procoptodon goliah. Reproduced with permission of the artist, Peter Trusler and the Australian Postal Corporation. The original work is in the National Philatelic Collection, Melbourne.
Aspiring diplomats match wits with ‘reality’

Nearly 80 Flinders students gained a unique taste of a ‘day in the office’ as a government adviser this month when they confronted a series of imaginary ‘crises’ in trouble spots around the world.

Teams comprising International Studies, Law, Arts, Education, and Behavioural Science students were asked to analyse a complex set of hypothetical foreign policy issues and provide ‘advice’ to the Australian Government of the day.

Modelled on the highly successful Hypothetical television series, the ‘clues’ provided to the students—which evolved over three hours— included a political coup and a health pandemic in Asia and nuclear and conventional weapons proliferation in Middle East ‘hot spots’.

The students were advised and mentored by former Federal Defence Minister and Opposition Leader, Kim Beazley.

Student Stephen Cotton said the hypothetical had provided a very useful, hands-on experience.

“I learned a lot about how Australia is assessing the situation in Pakistan and how our regional forces in Afghanistan are looking at Pakistan’s instability at the moment, especially in terms of nuclear weapons,” Stephen said.

Fellow student, Lindjeta Sadriu, said the event was “a very different experience to what we are used to in a lecture or tutorial setting and gave us an insight into what we could expect when we leave university”.

Lindjeta said Mr Beazley’s concluding remarks were very useful “because they made you think in a more analytical way.”

The long time politician and now Australian National University Chancellor said he had been “very impressed with the depth of knowledge of the students who were participating and, as diplomats-in-training, they made a very good start”.

“I think one of the things they needed to do is bury themselves down more deeply in the actual scenario that confronted them, as opposed to what might be the breadth of policy. But having said that, such experience would come with the territory if they had been trained by one of the relevant departments,” Professor Beazley said.

The hypothetical was supported by one of Flinders’ Teaching and Learning Innovation Grants. It delivered a model of problem-based learning, together with the development of workplace skills, and demonstrated how the combination of the two can be incorporated into current teaching practices.

Professor Kim Beazley and Flinders students Stephen Cotton and Lindjeta Sadriu

For full details Of the conference program, visit http://ehlt.flinders.edu.au/conferences/greek/resconf2009/

One of the most intractable diplomatic problems facing the world today will be a focus of the 8th International Conference on Greek Research being hosted by Flinders from July 2 to 5.

Some of the world’s leading academics on the territorial conflict between Greek and Turkish Cypriots will explore the latest thinking on the subject in a series of public lectures and panel discussions.

Professor Michael Tsianikas, convenor of the conference and coordinator of Modern Greece at Flinders, said the Cyprus problem continues to exercise the minds of intellectuals worldwide.

“Cyprus is not only critical to relations between Greek and Turkey, it is also important to those countries’ relations with Europe,” Professor Tsianikas said.

“In order to understand the complexities of the Mediterranean countries and the Middle East, it’s important to understand the place of Cyprus, how dynamic and fragile it is, and where it is situated geographically,” he said.

In addition to Professor Andreas Theophanous’ and Professor Van Coufoudakis’ keynote addresses on Cyprus, the conference will introduce a new Cyprus expert on the Flinders staff.

Dr Andrekos Varnava, a lecturer in the Department of History and the author of three books on Cyprus to be published this year, will present Cyprus: Political Modernity and the Structures of Democracy in a Divided Island.

The bilingual conference also features papers on a wide range of themes related to Greek culture from antiquity to the present day, a professional development seminar for teachers of Modern Greek, exhibitions, book launches and an extensive cultural program.

Professor Tsianikas said the conference is a central part of celebrations to mark 20 years of Modern Greek studies at Flinders.

For full details Of the conference program, visit http://ehlt.flinders.edu.au/conferences/greek/resconf2009/

“Over those 20 years we’ve educated hundreds of students and teachers, developed a very strong postgraduate program and initiated this biennial international conference which attracts delegates from all over the world,” he said.

Vincent Ciccarello
Despite being uprooted twice from her home in the Afghanistan capital, Kabul, 25-year old Sonia Ziaee has taken the major disruptions to her life and education in her stride. She is now studying for three semesters at Flinders University with funding from the Peace Scholarship Plan.

War in Afghanistan and subsequent tensions with the Taliban regime twice led Ms Ziaee’s family to seek refuge in Pakistan, where she completed her schooling.

After returning to Kabul in 2002, Ms Ziaee found work training Afghan women in basic computing before taking up an opportunity with software systems firm CISCO to travel to the United States to gain a qualification as an instructor.

On her return to Kabul, she established a training program for young women in computing, before taking up a procurement position with a security and logistics firm.

Ms Ziaee is studying International Business and Accounting topics at Flinders, and hopes to extend her stay to complete her degree. She also keeps up with her current role as cost controller for the 700-strong company in Kabul via phone and internet links.

While she has ambitions to pursue postgraduate education in America or Europe, Sonia sees her future very much in Afghanistan.

“We have very limited opportunities for businesswomen in Afghanistan. I want to be one of the first,” Ms Ziaee said.

Charles Gent

Victims, but no mere pawns: Russia’s bourgeoisie

When Mikhail Gorbachev began the revival of Russian capitalism in the 1980s, there were no Russians left who remembered what a market economy looked like – Russia’s last captains of industry had died of old age, mostly in Paris.

In his new book Cronies or Capitalists, Flinders historian Dr David Lockwood analyses the comparatively brief history of Russia’s moneyed middle-classes and industrial entrepreneurs.

Dr Lockwood said both Soviet and Western historians have tended to view the bourgeoisie as weaklings and creatures of the Tsarist State.

“I went into the research expecting to have this proved, but it was not what I found at all,” he said.

Dr Lockwood said that the bourgeoisie in Russia essentially came into being in the second half of the 19th century: after a drubbing in the Crimean War, Russia’s rulers realised that to keep up with the rest of Europe in military terms, industrialisation was a necessary evil.

“Russian capitalists made great strides forward, but the regime was always distrustful of them, seeing them as an alternative source of power and regulating them heavily,” Dr Lockwood said.

According to Dr Lockwood, the hostility of the Tsarist regimes backfired, with the bourgeoisie becoming increasingly sympathetic to the reformist – and later revolutionary – movements that championed their liberties.

Dr Lockwood said that the bourgeoisie were very supportive of the revolution of 1905.

“They saw a renewed, strong state as the dynamo of Russia’s future,” he said.

The crisis induced by the First World War proved fatal not only to the Crown, but to the capitalists as well: when the February revolution of 1917 came, the State turned out to be more powerful than they wished, and in October the militant socialism of the Bolsheviks swept into power.

In the face of Lenin’s hard-line doctrine, most of the entrepreneurs chose exile, awaiting an opportunity to return that never came.
Community benefits from partnership

Flinders University and Anglicare SA have formed a partnership that aims to deliver training and research outcomes to benefit a broad spectrum of the community.

The memorandum of understanding (MoU), signed last month by Flinders Vice-Chancellor Professor Michael Barber and Anglicare CEO Dr Lynn Arnold, allows for student placements, learning and employment pathways, as well as staff professional development in a range of areas.

It also envisages the development of a collaborative research agenda that includes contributing to policy development in the social policy domain.

Professor Barber said the arrangement has the potential to enhance the way universities currently engage with non-government and not-for-profit organisations that make up the “third sector”.

“As part of our community engagement mission, Flinders collaborates with many NGOs and not-for-profits, and this will continue,” Professor Barber said.

“The special partnership with Anglicare SA is distinctive and exciting because it allows for a university-wide scope of engagement, from the disciplines of business and law to social work and housing studies,” he said.

“For example, Flinders students will get the opportunity to undertake placements with Anglicare SA, while Anglicare SA staff will be able to study management at the University or take part together in community forums.

“At the same time, researchers from both organisations will collaborate on social inclusion and ageing projects.

“We are looking forward to working with Anglicare SA and to the benefits the partnership will bring to the community at large.”

The MoU signing coincided with the launch of Anglicare SA’s annual Winter Warmth Appeal to support South Australia’s hungry and homeless people.

Vincent Ciccarello

90 seconds to help save the world

You can convey a lot about climate change in 90 seconds, and a Flinders University competition is asking students in South Australia and the Northern Territory to do just that.

A prize of $500 is offered in each of three categories – primary, secondary and tertiary – to students who produce a micro-movie to celebrate World Environment Day. Micro-movies of no more than 90 seconds duration need to address the theme of “World Environment Day 2009 – UNite to Combat Climate Change”.

Shortlisted movies will be screened and the winners announced at the Flinders University Open Day on Sunday, August 16. Winning films will also feature on the Flinders Virtual Open Day website.

The competition is run by the Department of Screen Studies and Media and the School of Geography, Population and Environmental Management at Flinders. Entries will be judged on creativity, originality, quality and flair.

Competition details

Full details and conditions of the competition can be found on the Flinders website at: www.flinders.edu.au/world-environment-day/

Entries close on July 31, 2009.

Donations

Can be made at: www.hopesa.org.au/support/ Winterwarm.html or by phoning 1300 HOPE SA (4673 72)

Staff

Are invited to read more about Flinders partnership with Anglicare SA by visiting www.flinders.edu.au/news/ anglicare

Climate change is affecting habitats
Mobilising microbes to rescue farmland

There are huge potential benefits to the agricultural sector from a Flinders University research project that will trial the use of lupin crops as a way of eliminating accumulated herbicide and pesticide residues in the soil.

Environmental health scientist Associate Professor Richard Bentham and plant physiologist Associate Professor Kathleen Soole have won a $76,000 Australian Research Council Linkage grant for a research collaboration with Injekta Pty Ltd, an Adelaide based agronomy company. Injekta will contribute $18,000 to the project.

Associate Professor Bentham said that soil contamination poses a major problem for commercial farmers, because repeated use of chemicals such as sulfonyl urea to control weeds can eventually render the soil unfit for further crop production.

He said that lupins, with their extensive root systems, have the potential to remediate polluted soil through a process known as rhizo-remediation – they enhance the action of microbes living in their root zones that break down toxic residues.

"The idea is to use lupins as a rotation crop to clean the soil up for other crops, particularly cereal crops," Associate Professor Bentham said. The approach relies on a fortuitous chemical resemblance.

Because lupins secrete aromatic compounds – compounds that contain a benzine ring in their structure – their presence enriches microbial populations that will then, in theory, go on to degrade the similar structures found in herbicides and pesticides.

Associate Professor Bentham said there is also the possibility of a 'double whammy' effect.

"Lupins have a dense root system: not only will they clean up the soil, but they also have the potential to improve phosphorous and nitrogen availability in the soil at the same time.

"The idea is that the soil will actually end up in a better condition, just from the natural process of growing lupins in it."

The research represents an Australian first.

"Rhizo-remediation in Australia has been very focused on cleaning up metals – this is the first time a croppable species is being looked at to clean up organic contaminants," Associate Professor Bentham said.

Charles Gent

3D software takes on a second life in learning

A "cool" technology was put through its paces at a recent workshop at Flinders, when a computer hook-up allowed Flinders Digital Media students to meet their Norwegian counterparts from the National Science and Technology University in Trondheim, which runs a virtual campus within Second Life.

Second Life is a sophisticated 3D software program that allows participants to adopt a persona or "avatar" and interact with others in virtual environments online.

While Second Life's current popularity stems from its role as a social and entertainment tool, Digital Media Studies lecturer Mr Theodor Wyeld said that the technology holds enormous potential for collaborative educational and creative projects.

"Because it's not bound by any geographic barriers, it opens it up to having international collaborations, which then lead to cross cultural exchanges of points of view," Mr Wyeld said.

"It is also active learning: you are asking questions and getting responses."

Second Life presents simulation possibilities too, with potential applications in training across the sciences and social sciences, thanks to its ability to provide realistic scenarios that can be explored without physical risk.

"Our graduates from the Digital Media program could be the very people who are designing these programs, so it's important for them to see the possibilities," Mr Wyeld said.

Mr Wyeld recently co-authored a chapter on communities of practice and the use of 3D collaborative virtual environments, distilling five years of pedagogical research in the field. It outlines the processes and outcomes of the increasing use of these types of technologies in the classroom as simulated learning places.

Flinders attracts eminent scientist to top post

Eminent plant scientist Professor David Day has been appointed Deputy Vice-Chancellor (Research) at Flinders University.

Professor Day is currently Dean of the Faculty of Science and was Executive Dean of the Faculties of Science, Agriculture and Veterinary Science at the University of Sydney. Recognised for leading high-level research groups, he was a founder of the Australian Research Council Centre of Excellence in Plant Energy Biology, where he is still a Chief Investigator.

Flinders University Vice-Chancellor Professor Michael Barber said Professor Day brings a wealth of experience, as a researcher, teacher and academic leader, to the role.

“Professor Day has an impressive record of achievement in the field of plant science, as the manager of high-performing university faculties and as a teacher and mentor,” Professor Barber said.

“He has a thorough understanding of the Australian research environment, and of the critical research needs of Australian society, industry and governments,” he said.

“We look forward with enthusiasm to Professor Day’s leadership of the ambitious research agenda at Flinders University, and I am delighted to announce his appointment.”

For Professor Day, a world-renowned specialist in plant biochemistry and molecular biology, the appointment marks a return to South Australia. A graduate of Adelaide Teachers College and the University of Adelaide, Professor Day subsequently held postdoctoral fellowships at the University of Illinois and UCLA that launched his academic and research career. He was a research scientist at the French Centre D’Etudes Nucleaires in Grenoble and has held senior academic posts at the Australian National University and University of Western Australia.

Professor Day has more than 200 published works and is an Institute for Scientific Information highly cited researcher. He will take up his appointment at Flinders University towards the end of the year.

Vincent Ciccarello

Linking with Flinders future

Flinders has extensive links beyond metropolitan Adelaide, and so Dr Leonie Hardcastle’s insights into regional South Australia are valuable in her role as a general staff representative on the University Council.

Currently Dr Hardcastle serves as Associate General Manager in the Faculty of Social Sciences, but her connection with Flinders began in the early ’80s – first as a mature-age student studying International Relations, American Studies and English, and later as a part-time doctoral candidate in Australian Studies.

While maintaining a strong academic involvement as a teacher and researcher, Dr Hardcastle has since served in a variety of general staff positions and on Council since mid-2008. She sees her responsibility as bringing the perspectives of general staff to bear on the Council’s key strategic decisions.

“The general staff not only comprise the majority of our employees, they also play such a vital role in making the university work, not least in relation to our academic operations and in making strategic decisions effective in terms of implementation,” Dr Hardcastle said.

“One of the positive things about being on Council is crossing between the University and the broader community,” she said.

A particularly strong engagement with TAFE has reinforced her views about the value of a vibrant vocational education sector.

For five years until its absorption into what is now TAFE SA Adelaide South, Dr Hardcastle served on the Governing Council of the then Onkaparinga TAFE.

“During this time, a major activity was an ultimately unfulfilled merger proposal with the South-East TAFE, an initiative for which I also served on the Interim Council,” she said.

“The insight into institutional management, budgetary challenges and government policymaking during a period of constant change was invaluable.”

This involvement also provided a renewed perspective on regional South Australia in a globalising world.

“Many of our meetings took place at TAFE local campuses, so over the course of a few years we all learned a great deal about broader aspirations not only in the Adelaide South but also in Keith, Mt Gambier, Naracoorte, Millicent, Kingston, Pinnaroo, Kingscote, Victor Harbor, Murray Bridge and elsewhere.”

It is an experience that, more than she realised at the time, might anticipate something of Flinders own future configuration as the University thinks about further extending its footprint into regional South Australia.

Dr Leonie Hardcastle

Professor David Day
A novel take on an ancient crime

As a teenage exchange student in an isolated town in northern Iceland, Hannah Kent found the story of Agnes Magnusdottir, the last person executed in Iceland for murder, playing on her mind.

Now, as a creative writing student at Flinders, Hannah is in the process of turning the grim history into a novel.

In 1828, Agnes, another servant girl and a youth were convicted of stabbing to death a well-known and charismatic rural doctor and of making an unsuccessful attempt to hide the crime by arson. Following the trial and her conviction, Agnes was publicly beheaded with an axe in 1830.

The novel is set during Agnes’s six-month detention in a farmhouse as she awaits her execution. Through painstaking historical research, which has included translating Icelandic documents, Ms Kent has marshalled the scant facts of the case and used her local knowledge to colour the narrative. But her chief challenge lies in letting the character of Agnes “speak for herself”.

In taking on a fictionalised biography, Ms Kent says she has followed rules suggested by novelist Margaret Atwood.

“What I’ve tried to do is stay true to what is known and what is factual; where something is ambiguous, I’ve written what my research suggests is the most likely scenario; and where there are outright gaps I’ve felt free to invent,” she said.

“One of the reasons I want to write this story is to give Agnes a voice, which she’s been denied all these years.”

Ms Kent said the eerie atmosphere and landscapes of Iceland permeate the book, and are still vivid in her own mind.

“Iceland had a terrific effect on me, and changed the person that I was. It’s a place that stays with you,” she said.

To date, Ms Kent’s efforts have seen her awarded the University’s honours thesis prize for English, with one of the examiners describing her portrait of Agnes as “little short of astonishing”. She is continuing to work on the draft of the novel for her PhD, under the supervision of Dr Ruth Starke.

Taking a hard look at the dome

It turns out that lying on your back and staring at the ceiling can be both stimulating and educational.

A dome projection set-up lent to Flinders by the Australian Network for Art and Technology was the centrepiece of a recent seminar on experiential media, hosted by the Department of Screen and Media at Flinders.

Consisting of a portable dome-shaped structure and a mirror set-up that allows the projection of still and moving images, the facility offers a screening environment usually seen only in planetaria and museums of natural history.

Lecturer Dr Melanie Swalwell said the dome was the latest in a line of technologies to be touted as having an “immersive” potential.

“We were interested in taking a critical look at the dome as a screening environment, as well as what its potential might be,” she said.

“This was a unique opportunity for us to trial the technology, to demonstrate it to students and to explore research opportunities.”

As well as offering possibilities for Screen and Media students to develop content for dome projections, she said the technology could provide simulated environments and scenarios for teaching and training.

Charles Gent