

EMERITUS

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‘Billions of dollars wasted’ in water recovery, ANU study finds

AN ANU STUDY has found billions of dollars are being wasted in water recovery subsidies to increase irrigation efficiency across the Murray-Darling Basin.

The Australian Government estimates \$3.5 billion in subsidised on- and off-farm water infrastructure has achieved some 700 gegalitres per year increases to stream and river flows across the Murray-Darling Basin. A gegalitre (GL) equals a billion litres. Based on a calculation from a range of estimates, the ANU study found the subsidised water infrastructure may have only delivered 70 GL/year increases to stream and river flows - 630 GL/year less than the Government's estimate.

Professor John Williams, from the ANU's Centre for Water Economics, Environment & Policy and one of the researchers, said, "Simply put, without independent and comprehensive water accounting, including what is happening to return flows and the effects of multi-billion dollar subsidies for irrigation infrastructure on stream flows, expect more fish kills, a continuing environmental crisis, and no peace in the Murray-Darling Basin

"The Government should halt any further subsidies until their water accounting adds up properly. These subsidies should not resume until it can be scientifically determined by how much they increase net stream and river flows, if at all, and at what cost. This requires comprehensive water accounting that was promised in 2004 by Australian governments, that still hasn't been delivered.

"Our study has undergone a comprehensive peer-review process and our findings marry up very well with those in the recent Royal Commission report and the Australian Academy of Science report - we are all singing from the same songbook."

Co-researcher Professor Quentin Grafton said their analysis showed the average cost of water recovery for infrastructure subsidies could be as much as \$50 million per GL returned to the Murray-Darling Basin every year.

"We calculate that the actual average cost of increasing stream and river flows from subsidies to increase irrigation efficiency infrastructure in the Murray-Darling Basin could be 10 times more expensive than what is estimated by the Australian Government and 25 times more expensive per litre of water recovered than buying back water entitlements from willing sellers," Professor Grafton said.

"There is too much uncertainty about the actual effect on return flows from increases in irrigation efficiency in the Murray-Darling Basin," Professor Grafton said.

“We acknowledge that there is uncertainty in our own estimates as well, but it only strengthens the case for the long-promised, but never delivered, comprehensive water accounting system to be set up for the Murray-Darling Basin.

“When there is published evidence in peer-reviewed scientific journals of deterioration of key aspects of the ecology in the Basin, ongoing failures of water reform, and misguided policies that are not increasing stream flows, the Australian Government needs to sit up and pay attention and actually deliver what was promised in the Basin Plan.

“There is an urgent need, especially given the drought and the mismanagement of water demonstrated by the Menindee fish kill, to have a much better understanding of where water is, how it is being used, and how we can best recover water to ensure the long-term sustainability of communities, agriculture and the environment in the Basin. Without it, we are flying blind and will not deliver on the key objects of the Water Act.”

The peer-review study is published in *Australasian Journal of Water Resources* <https://www.tandfonline.com/doi/full/10.1080/13241583.2019.1579965>

WHO launches an app to help detect hearing loss

THE WORLD HEALTH ORGANIZATION (WHO) has launched “hearWHO”, a free application for mobile devices which allows people to check their hearing regularly and intervene early in case of hearing loss. The app is targeted at those who are at risk of hearing loss or who already experience some of the symptoms related to hearing loss.

WHO says that among those who will particularly benefit from this new tool are people who are often exposed to high levels of sound, such as those who listen to loud music or work in noisy places, people who use medicines that are harmful to hearing, and people aged above 60 years. Symptoms indicating the onset of hearing loss include a ringing sensation in the ear, known as tinnitus, frequently missing parts of a conversation, or a tendency to increase the volume of television, radio or audio devices.

Early detection of hearing loss is crucial to identify risky behaviour and to ascertain the most appropriate intervention. Such interventions are identified by hearing care professionals and can range from captioning and sign language to hearing aids and cochlear implants. Interventions to prevent, identify and address hearing loss are cost-effective.

“Many people with hearing loss are unaware of it and as such they miss out on educational, professional and everyday-life opportunities,” said Dr Etienne Krug, Director of the WHO Department for the Management of Non-communicable Diseases, Disability, and Violence and Injury Prevention. “Regular hearing checks ensure that hearing loss is identified and addressed as early as possible.”

The ‘hearWHO’ app is based on a technology which requires users to concentrate, listen and enter into their mobile devices a series of three numbers when prompted. These numbers have been recorded against varying levels of background sound, simulating listening conditions in everyday life. The app displays the users’ score and its meaning and stores the outcome of the test so that the user can monitor hearing status over time. Reminders to take the test regularly can be set by users. The app can be used by individuals as well as health providers with a view to facilitating screening especially in low-resources settings.

For more information, access <https://www.who.int/deafness/news/hearWHOApp-news/en/>

Professor Deborah Terry AO elected chair of Universities Australia

PROFESSOR DEBORAH TERRY AO, Vice-Chancellor of Curtin University, has been elected the next Chair of Universities Australia. As one of the current UA Deputy Chairs she will succeed Monash University Vice-Chancellor Professor Margaret Gardner AO from May 21. Professor Terry said she was honoured to lead the organisation. “It’s a deep honour to be able to give voice to the profound role of Australia’s universities to change the lives of individuals, communities and nations,” she said. “Through teaching and inspiring the next generation, and forging research breakthroughs that change knowledge forever, universities are central to our future prosperity. I’m delighted to build on Margaret’s strong legacy and to pick up seamlessly in our advocacy to the Australian public, decision makers, and community leaders.”

Professor Terry has been a member of the UA Board since 2015 and has served as Deputy Chair for the past two years. She is a Fellow and past President of the Academy of Social Sciences in Australia, a member of the Advisory Council of the Australian Research Council (ARC) and has previously chaired both the Australian Council of Learned Academies and the ARC's College of Experts in the Social, Behavioural and Economic Sciences.

New tool to track infectious diseases in Australia

RESEARCHERS AT CSIRO have developed a new tool to understand how human infectious diseases found overseas might spread in Australia. Using data from dengue virus outbreaks in Queensland as a case study, the tool identifies and tracks new cases of infection to their original source in Australia, and traces how the disease has transferred between people.

It provides new insight into the behaviour of human diseases brought into Australia and is part of the broader Disease Networks and Mobility (DiNeMo) project aimed at developing a real-time alert and surveillance system for human infectious diseases. CSIRO researcher Dr Dean Paini said the tool aims to help protect Australia against the increasing risk of infectious diseases like dengue and measles, which have already sparked numerous health alerts across the country this year. "Although Australia is relatively disease-free compared to other regions of the world, diseases are brought in by infected people who can be Australians returning home from holiday, tourists travelling to Australia, or fly-in fly-out workers travelling abroad," Dr Paini said. "Understanding how these infections spread once they reach Australia means we can predict when and where an outbreak is likely to occur – this means hospitals and biosecurity agencies can be as prepared as possible. When it comes to biosecurity, time is always the enemy, so being able to direct resources to the right place, at the right time can help diagnose and treat infected people as quickly as possible."

Dr Raja Jurdak, a researcher from CSIRO's Data61, said that traditional methods of tracking infection routes often depend on time-consuming site investigations or interviews relating to travel routes of infected patients. She says, "Our tool draws on multiple incomplete datasets, including reported dengue cases, tourist surveys, geo-tagged social media posts, and airline travel, and combines them in a smart way to understand the trends that underpin the spread of diseases. This methodology allows us to look into the past and identify the sources of infection, and also predict the potential future spread of disease".

Dengue is transmitted by the *Aedes aegypti* and *Aedes albopictus* mosquitoes. Currently, only the *Aedes aegypti* is found in mainland Australia, mostly in Northern Queensland, while the *Aedes albopictus*, which prefers cooler climates, can also be found in the Torres Strait.

Climate link between krill and whale populations

THE ABUNDANCE OF KRILL could influence future whale populations in the Southern Hemisphere such as Blue, Southern Right and Fin whales, according to new research from CSIRO, and the University of Queensland. Whaling in the last century pushed many species almost to extinction, with some still below their pre-whaling numbers. The findings highlight the importance of krill populations to assist recovery of whale populations.

Scientist Dr Viv Tulloch, who led the study, said this was the first time scientists had been able to link climate change to the future abundance of krill and how this could influence whale populations in the Southern Hemisphere. "Krill is the main food source for whales, so we linked possible changes to krill levels in our southern oceans based on high carbon emissions predictions to whale populations in these areas," Dr Tulloch said. "We found that the impacts on whale species could differ, depending on the region and where they feed. Whale populations in the Pacific Ocean, particularly Blue, Southern Right and Fin whales, could have less krill to feed on than those found in the Atlantic and Indian Oceans."

CSIRO's Model of Intermediate Complexity for Ecosystem Assessment, known as MICE, was used to predict these future scenarios using data on ocean temperature, primary productivity and sea-ice.

CSIRO senior scientist and co-author of the paper Dr Éva Plagányi said the research highlighted how a changing marine environment such as increases in ocean temperatures could affect krill, and its importance for ongoing whale recovery. "Our modelling took into consideration the slow population growth rates of

whales, the connection between life history and water temperatures, and dependency on prey to highlight the need for ongoing protection of already depleted whale populations,” Dr Plagányi said.

The *Global Change Biology* paper, “Future recovery of baleen whales is imperilled by climate change”, is available from CSIRO. This paper builds on a previous paper, *Ecosystem modelling* to quantify the impact of historical whaling on Southern Hemisphere baleen whales, published in *Fish and Fisheries*, to provide more information on Southern Hemisphere whale recovery.

The universe in CSIRO’s sights

A TEAM OF AUSTRALIAN ENGINEERS AND SCIENTISTS has designed the Australian infrastructure for the world’s largest radio telescope, the Square Kilometre Array (SKA), taking the billion-dollar global project one step closer to reality. The SKA will explore the universe in unprecedented detail, doing so hundreds of times faster than any current facility.

The SKA Infrastructure Australia consortium, led by CSIRO and industry partner Aurecon Australia, has designed everything from supercomputing facilities, buildings, site-monitoring and roads, to the power and data-fibre distribution that will be needed to host the instrument at CSIRO’s Murchison Radio Astronomy Observatory in remote Western Australia. Antennas will also be located in Southern Africa

Space projects mark 30-year Boeing-CSIRO partnership

BOEING AND CSIRO have announced 20 new joint research projects for 2019, making this the largest research portfolio in the history of their research and development relationship. The projects form part of the current AU\$35-million five-year agreement and signal a new direction towards the joint development of space-related technologies.

The new agreement includes four new joint space technology research projects:

- Space situational awareness for commercial and civil purposes such as monitoring space debris;
- on-board image-processing and analytics for Earth observation satellites;
- lightweight, radiation-shielding materials for spaceflight;
- in-orbit manufacturing of space structures or satellite components.

The latest projects expand the scope of joint research to five of CSIRO’s domain areas of expertise: advanced manufacturing, data analytics, energy, future insight consulting services, and space technology. For Boeing, these projects involve teams throughout the company, including space, R&D and Boeing HorizonX

Boeing has named CSIRO as supplier of the year three times, including the past two consecutive years.

Awards to outstanding university teachers

AUSTRALIA’S OUTSTANDING UNIVERSITY TEACHERS have been recognised with the nation’s most prestigious teaching honours in a ceremony at Universities Australia’s annual higher education conference.

Griffith University’s Dr Kevin Larkin was named the Australian University Teacher of the Year for his research and new forms of teaching mathematics. This year’s awards recognise 13 outstanding teachers and teaching programs.

Details for the other winners in the 2018 Australian Awards for University Teaching can be found [here](#).

University researchers ‘most trusted’ by public

UNIVERSITY RESEARCHERS AND EXPERTS are the most trusted group in society to ensure facts and evidence are part of important public debates, according to a survey of 1500 people, by JWS Research for Universities Australia.

It shows that even in an era in which institutional trust all across society is at a stark low, a majority (53 per cent) of Australians still put their trust in university scientists, researchers and experts to inject facts and evidence into public debates. Doctors and medical professionals were the next most trusted, with 39 per cent of Australians expressing trust in them on the same question.

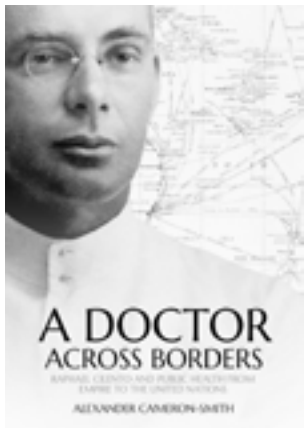
Universities Australia Chair Professor Margaret Gardner said it was clear that Australians looked to experts to verify facts, dispel myths, and ensure public discussion was informed by evidence. She added, “As uni researchers share their expertise, they help us to delve more comprehensively into the who, what, when, where, why and how of important events in our world.

“To deliver facts and evidence on matters of public debate, not only do most Australians trust university researchers — they are also the group that Australians trust most. This should be heartening to every one of the researchers working hard in our universities to advance knowledge, to unravel the mysteries of human life and the universe, and to transform the lives of other Australians profoundly through their work.”

Another finding from the survey showed that two in three Australians oppose funding cuts to university research. Cuts of \$328 million to university research were unveiled in December’s mid-year Budget update.

The survey found 66 per cent of Australians oppose the cuts to university research. Only one in ten Australians supports the cuts. The study found three in five Australians — 62 per cent — also oppose cuts to university student places, which sliced \$2.1 billion from Australia’s universities in late 2017.

BOOKSHELF



*A Doctor Across
Borders: Raphael
Cilento and
public health
from empire to
the United
Nations*

By: Alexander Cameron-Smith 

Published by: ANU Press

ISBN (print – rrp \$50.00): 9781760462642

ISBN (online): 9781760462659

DOI: <http://doi.org/10.22459/DAB.2019>

In his day, Raphael Cilento was one of the most prominent and controversial figures in Australian medicine. As a senior medical officer in the Commonwealth and Queensland governments, he was an active participant in public health reform during the inter-war years and is best known for his vocal engagement with public discourse on the relationship between hygiene, race and Australian nationhood. Yet Cilento's work on tropical hygiene and social welfare ranged beyond Australia, especially when he served as a colonial medical officer in British Malaya and in the Mandated Territory of New Guinea. He also worked with the League of Nations Health Organization in the Pacific Islands and oversaw international social welfare programs for the United Nations.

On one level, this professional mobility allowed ideas and practices of public health and government to circulate between colonial spaces of northern Australia, the Pacific Islands and Asia. On another, it meant that Cilento's Pacific colonialism and colonial experience shaped his understanding of Australian national health and welfare. Rather than attempt a comprehensive biography of Cilento, this book instead uses this border-crossing career as a means to explore several material and discursive facets of Australia's relationships to the Pacific and the world.



*The Court as
Archive*

Edited by: Ann Genovese , Trish Luker , Kim Rubenstein

Published by: ANU Press

ISBN (print – rrp \$50.00): 9781760462703

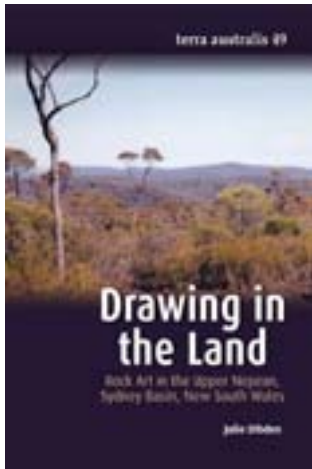
ISBN (online): 9781760462710

DOI: <http://doi.org/10.22459/CA.2019>

Until the late 20th century, 'an archive' generally meant a repository for documents, as well as the generic name for the wide range of documents the repository might hold. An archive could be visited, and then also searched, to discover past actions or lives that had meaning for the present. While historians and historiographers have long understood the contests that archives contain and represent, the very idea of 'the archive' has, over the last 40 years, become the subject and object of widening and intensified consideration. This consideration has been intellectual (from scholars in a wide range of disciplines) and public (from communities and individuals whose stories are held captive, or sometimes hidden or excluded from official archives), as well as institutional. It has involved scrutiny and critique of official archives' limitations and practices, as well as symbolic, affective and theoretical expansion and heightened expectation of what 'the archive' is or should be. The very language of 'the archive' now carries freight as administrative practice, normative value, metaphor, description and aspiration in different ways than it did in the 20th century.

This collection offers a unique contribution to these reinvigorated and sometimes new conversations about what an archive might be, what it can do as a consequence, and to whom it bears custodial responsibilities. In particular, this collection addresses what it means for contemporary Australian superior courts of record to not only have constitutional and procedural duties to documents as a matter of law, but also to acknowledge obligations to care for those materials in a way that understands their public meaning and public value for the Australian people, in the past, in the present and for the future.

BOOKSHELF



***Drawing in the
Land: Rock Art
in the Upper
Nepean, Sydney
Basin, New
South Wales***

By: Julie Dibden

Published by: ANU Press

Series: Terra Australis

**ISBN (print – rrp
\$55.00):** 9781760462581

ISBN (online): 9781760462598

DOI: <http://doi.org/10.22459/TA49.2018>

Drawing in the Land offers an important contribution to the field of rock art research and Australian archaeology. It provides a detailed study of the previously under-examined rock art of the Hawkesbury/Nepean area of New South Wales. The study presents a detailed historiography of Australian rock art research and, through the lens of landscape archaeology, offers an innovative contribution to rock art studies in the wider Sydney Basin. The volume's theoretical focus on materiality, embodied practice and performance allows for the charting of ideational change and provides a unique contribution to the late Holocene archaeology of NSW and contact archaeology within Australia more broadly.

MATTERS OF POSSIBLE INTEREST

Copyright issues here and overseas

The Copyright Agency has listed a number of copyright developments in Australia and overseas. Open the following links for more information.

- [Copyright Agency's Cultural Fund and the Australia Council support new research on the international success of Australian books](#)
- [Indie Book Awards 2019 shortlists announced](#)
- [Books Create Australia update](#)
- [ASA 'outraged' by unauthorised lending of scanned books](#)
- [Japanese law extends copyright protection period to 70 years](#)
- [Singapore government to amend the Copyright Act](#)
- [UK National 'Licence to Copy' campaign targets schools](#)
- [Europe's major copyright reforms in crisis as talks collapse](#)

Western Civilisation degree

More information about the Bachelor of Arts in Western Civilisation and University of Wollongong's partnership with the Ramsay Centre for Western Civilisation is published in the following on-line documents:

- [BA Western Civilisation curriculum design](#)
- [BA Western Civilisation curriculum content](#)
- [BA Western Civilisation Origins and Reception](#) (consultation feedback)
- [UOW & Ramsay Centre Memorandum of Understanding](#)

DIARY DATES

ANUEF inquiries; to Craig Reynolds (creynolds697@gmail.com / Craig.Reynolds@anu.edu.au) or ANU Events (02 6125 4144 / events@anu.edu.au)

Wednesday 20 March, Noon for 12:30: Collegiate Lunch

Molony Room, 24 Balmain Crescent, Canberra

Includes a talk from Nic Peterson on “The political economy of land and native title rights in Australia: the current situation.”

Wednesday 3 April, Noon for 12:30: Collegiate Lunch

Molony Room, 24 Balmain Crescent, Canberra

Includes a talk from Dr Prame Chopra on “Earthquakes and tsunamis - should we be worried?”

25 to 27 June 2019: Asia Pacific Conference on Human Evolution (APCHE)

Griffith University, Brisbane

APCHE aims to bring together experts working on all aspects of human evolution in the broader Asian and Pacific regions. The conference will run for three days of general sessions including papers on palaeoanthropology, biological anthropology, archaeology, genomics and palaeogenomics, primatology, as well as the disciplines engaged in understanding the environment and site-specific contexts of human evolution, human behaviour and art.

For further information access website or email apche@griffith.edu.au

ANU/Canberra Times Meet the Author events

Further details and registrations available at <http://www.anu.edu.au/events/anuthe-canberra-times-meet-the-author-series> or 6125 4144.

Wednesday 13 March, 6pm: Judith Brett

Small Theatre, Kambri Cultural Centre

In conversation with Andrew Leigh on Judith's new book *From Secret Ballot to Democracy Sausage: How Australia Got Compulsory Voting*.

Wednesday 27 March, 6pm: Natasha Stott Despoja

Large Theatre, Kambri Cultural Centre

In conversation with Lieutenant General David Morrison on Natasha's new book *On Violence*. Vote of thanks by ANU Vice Chancellor, Professor Brian Schmidt

Wednesday 3 April, 6pm: Michelle Grattan AO

Coombs Lecture Theatre, Fellows Road, Australian National University

In conversation with Peter Martin for the national launch of a major new publication from Melbourne University Press. *Advancing Australia: Ideas for a Better Country*, edited by John Watson and Amanda Dunn, brings together new essays by eminent Australian authors addressing the issues that matter in the lead up to the 2019 election.

Tuesday 9 April 6pm: Rebecca Huntley

Small Theatre, Kambri Cultural Centre

In conversation with Andrew Leigh on Rebecca's new *Quarterly Essay On Politics and Progress*.

Tuesday 30 April, 6pm: Troy Bramston

Small Theatre, Kambri Cultural Centre

In conversation with Paul Kelly on Troy's new book *Robert Menzies*.

All events above currently bookable at anu.edu.au/events or 6125 4144 . David Stratton bookable at NFSA website. For further information, contact Colin Steele, Emeritus Fellow, ANU College of Arts and Social Sciences, on 6125 8983 or by email at colin.steele@anu.edu.au

ADMINISTRATION

ARRANGEMENTS FOR ANUEF ROOM BOOKINGS

Requests for booking the Molony Room should be addressed to Secretary of the ANU Emeritus Faculty Jan O'Connor at jantancress@gmail.com or Tel: 6247 3341

Supporters of ANU Archives can find updated news on the ANU website at <http://www.archives.anu.edu.au/news-and-events-1>

FINDING THE MOLONY ROOM

The Molony Room is on the south side of Balmain Crescent almost opposite University House. It is building 1c on <https://tinyurl.com/yckuknbj> set back between No 22 Balmain Crescent, which is the Acton Early Childhood Centre, and No 26 Balmain Crescent, which is the Academy of the Social Sciences. There are four free car parking spaces reserved for ANUEF members visiting the Molony Room in the Balmain Lane Car Park immediately south of the Molony Room. The room is marked on: <https://tinyurl.com/y7gsyqgh>



The next edition of Emeritus, the ANUEF Newsletter, will be published in April 2019.