

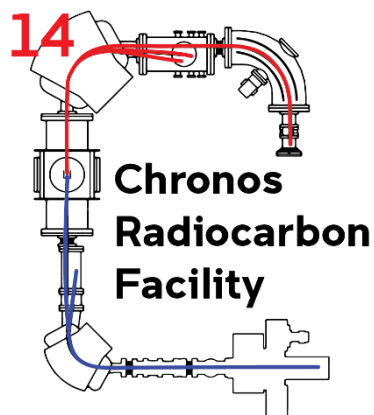


# PROGRAM

Sponsored by:



AUSTRALIAN RESEARCH COUNCIL  
**Centre of Excellence for Australian  
Biodiversity and Heritage**



## Acknowledgment of Country

The University of Queensland (UQ) acknowledges the Traditional Owners and their custodianship of the lands on which we meet.

We pay our respects to their Ancestors and their descendants, who continue cultural and spiritual connections to Country.

We recognise their valuable contributions to Australian and global society.



The AQUA 2024 conference will be held at the Moreton Bay Research Station in Dunwich on North Stradbroke Island, Minjerribah. This is Quandamooka Country and is under the custodianship of

[QYAC Quandamooka Yoolooburrabee Aboriginal Corporation](#)

We acknowledge the Quandamooka people and pay our respect to their Ancestors and their descendants who continue cultural and spiritual connections to country.

## Getting to Moreton Bay Research Station

Get the train to Cleveland Station from Central Station. From the train station there are free buses that take you to the Stradbroke Flyer ferry terminal. They are timed to make the Stradbroke Flyer ferry to Dunwich. [Stradbroke Flyer Gold Cat \(Copy\) \(Copy\) \(Copy\) \(Copy\)](#)

Tickets can be bought at the ticket office (or on the boat)

- Adults are \$21 return
- Students are \$15 return

The flyer goes every regularly throughout the day from Cleveland to Dunwich. 6:55am, 7:55am, 8:55am, 9:55am, 10:55am, 11:55am, 12:55pm, 1:55pm, 3:25 pm, 4:25pm, 5:25pm, 6:25pm, last ferry at 7:25pm.

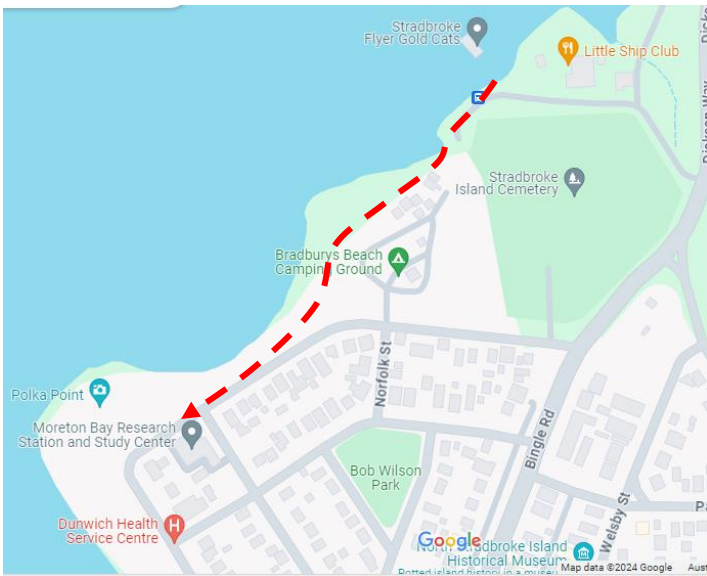
To return to Cleveland the ferry departs from Dunwich at 6:25am, 7:25am, 8:25am, 9:25am, 10:25am, 11:25am, 12:25pm, 1:25pm, 2:25pm, 3:55pm, 4:55pm, 5:55pm, 6:55pm, last ferry at 7:55pm.

For cars there is the Stradbroke Ferry – which you will need to book. [North Stradbroke Island Ferry | Sealink North Stradbroke Island](#)

## Moreton Bay Research Station

More information about [Moreton Bay Research Station - University of Queensland \(uq.edu.au\)](#)

Getting to MBRS from the Straddie Flyer at One Mile Jetty in Dunwich is a 500 m walk (see red dashed line on the map). When you get off the flyer at One Mile Jetty, turn right and walk to the end of the road (there is a turn around circle) and there is a footpath that leads off from the end of this road that goes between the beach and the campground (see red dashed line), and follow this to the end of the campsite when you go up a small rise and walk along the grass until you reach the research station.



Staying at the station:

For those staying at the station [Accommodation and common areas - Moreton Bay Research Station - University of Queensland \(uq.edu.au\)](#)

Bedding and linen is provided. Bring your own **Towel**.

## Saturday 22<sup>nd</sup> June – Sunday 23<sup>rd</sup> June

Field trip run by A/Prof Gilbert Price – information sent separately

## Monday 24<sup>th</sup> June

Workshops	Time	Title
Workshop 1	10:00 am – 4:00 pm	Geochronology: from the field to models
Workshop 2	1:00 – 4:00 pm	Ground Penetrating Radar
Lunch	12:30	
Welcome to country	4:00 pm	TBC
MBRS induction and Conference introduction Room allocation for those staying at MBRS	5:00 pm	
Dinner	6:00 pm	

### In order to minimise waste we request you bring:

- Water bottle
- Travel mug to use at the station
- Reuse an old name badge from a previous conference

### Posters

Poster Presentations – listed for each day below

**The poster should be A0 and portrait.**

### Mid Week Field Trip

Water bottle

Sunhat, sunscreen

Binoculars for looking at wildlife (hopefully we might see some iconic fauna)

Tuesday 25<sup>th</sup> June

Session/ Convenor	Time	Speaker	Title
Keynote Haidee Cadd	8:30	Matthew Adeleye	Recognizing the fundamental roles of natural forces in cultural landscapes for informed management: a case study from Lutruwita/Tasmania.
<b>Past vegetation</b>	9:00	Simon Haberle	Palaeoecological insights into last glacial to Holocene vegetation and fire dynamics from a monomictic lake within lowland Huon Pine ( <i>Lagarostrobos franklinii</i> ) rainforest adjacent to the Gordon River, Lutruwita/SW Tasmania.
	9:15	Sarah Cooley	Response, resilience and recovery of Tasmania's endangered Pencil Pine using a multi-archive palaeoenvironmental record
	9:30	Patrick Moss	Holocene Environments of the Southwest Corner of Tasmania
	9:45	Madeleine Bessell-Koprek	Reclaiming the importance of the grasslands of Long Island, Furneaux Group (Bass Strait), Lutruwita/Tasmania
Morning tea	10:00		
Lydia Mackenzie	10:30	Stephen Piva (online)	Constraining and comparing vegetation recovery and landscape responses between the Waikato lowlands and Hawke's Bay region after the 1.8 ka Taupō eruption, New Zealand
	10:45	Laura McDonald	Unravelling taphonomic bias and varied sediment transport dynamics in marine pollen records from offshore Aotearoa
	11:00	Annika Herbert	Quantifying late Quaternary rainfall seasonality for the Southern Hemisphere
	11:15	Jennifer Cooling	Coring in a hard land: recovery of palaeo-environmental records from Channel Country
	11:30	Kelsey Boyd	Evaluating the application of phytolith analysis in northern Australian environments: results from a plant and soil phytolith reference collection.
	11:45	Molly Turnbull	Using phytoliths to reconstruct vegetation and depositional histories in the Willandra Lakes Region
	12:00	Peter Kershaw	Applications of palynology to the history and restoration of the World Heritage listed Budj Bim landscape in SE Australia
Lunch	12:15		
<b>Southeast Queensland</b>	1:15	James Shulmeister	Causes of formation of the dune fields of K'gari, South East Queensland, Australia; the roles of sea-level change and climate.
Annie Lau	1:30	John Tibby	The late Holocene environmental history of Deepwater Lake, K'gari, south-east Queensland
	1:45	Kevin Welsh	The influence of changing sea level and hydroclimate on the Mungalla Coastal Wetlands in the Wet Tropics of Queensland
	2:00	Jonathan Marshall	Complexity in space and time: A multi-core, multi-proxy history of Eighteen Mile Swamp, Minjerribah
	2:15	Justine Kemp	Demise of the <i>Araucaria</i> scrubs: a pollen record of European transformation of Moreton Bay hinterlands
Afternoon tea	2:30		<b>Poster session</b> - see list of posters next page
	4:00		Introducing the AQUA committee
<b>Landscapes</b>	4:15	Andrew Gunn	Australian linear dune growth during glacial-interglacial cycles
Justine Kemp	4:30	Peter Almond	Quaternary landscape and soil processes: incorporating dynamic landsurface processes into conceptual models of soil evolution
<b>WISH</b>	4:45	Jasper Knight (online)	Identifying warm climate intervals during the Pleistocene and Holocene
	5:00	Jasper, Jamie and Lydia	WISH discussion – online and in person

Dinner	6:00		
	7:00	ECR session	Academia and Beyond – Jobs in Quaternary Science – Panel discussion with invited Quaternarists working in a range of different jobs.

## Tuesday 25<sup>th</sup> June – Poster session

Presenter	Title
Annie Lau	Where are all the coastal boulders? A global research network targeting coastal boulder deposits
Annika Herbert	The updated Indo-Pacific Pollen Database (IPPD): a valuable new asset to the Neotoma Palaeoecological online database
Bianca Dickson	A comparison of lake and speleothem pollen records from the Southwest Australian Floristic Region
Caroline Brownhall	Environmental change during a warmer climate in the recent geological past: mid-Pliocene pollen and charcoal paleoreconstructions from marine cores adjacent to the Wet and Dry Tropics of northeast Australia.
Catherine Kim	Predicting coral rubble risk in the Great Barrier Reef
Greer Gilmer	Southern Aotearoa New Zealand hydroclimate and westerly winds over the last 16,000 years
Haidee Cadd	Pollen in Australia's arid zone: potentials and problems.
Joan Macalalad	Last Glacial Maximum and deglacial brGDGT-based paleotemperature reconstruction from a subtropical wetland from Australia
Jonathan Tyler	Climate, fire, vegetation and people: a multidisciplinary approach to the environmental history of Kangaroo Island (Karti/Karta), South Australia
Juliet Sefton	Local to global sea-level changes recorded by mangrove sediment archives in the equatorial Pacific Ocean
Martin Koehler	Unveiling Coastal Hazards: Insights from Erratic Boulders on Niuatoputapu Island (Tonga)
Ulası Ngozi	Drivers of Early Pleistocene glacial-interglacial cycles using speleothems and ocean sediments
Zsanett Szilagyı	New insights on the internal structure of inter-reef Halimeda bioherms, northern Great Barrier Reef

Wednesday 26<sup>th</sup> June

Session/ Convenor	Time	Speaker	Title
Keynote	8:30	Gavin Dunbar	The Origin of the Central Great Barrier Reef
<b>Paleocean - Reefs</b>	9:00	Carra Williams	Coral reef response since the Mid Pleistocene Climate Transition on the NWS, Australia: insights from fossil coral reef cores
Juliet Sefton	9:15	Holly Ellis	Quaternary Evolution of the East Australian Current
	9:30	Bohao Dong (online)	Do palaeoenvironmental archives have uniform trace element distributions in contemporaneous increments? Investigating giant clam ( <i>Tridacna</i> ) shells through LIBS
	9:45	Mahsa Alidoostsalimi (online)	Oxygen isotope variations in <i>Conomurex luhuanus</i> : A new high-resolution paleoclimate archive from the Great Barrier Reef
	10:00	Matt Forbes	Rocky coastline bio-mediated carbonate deposits: Quaternary archive, modern environmental stress indicator or both?
Morning tea	10:15		
<b>Coasts</b> Ellen Corrick	10:45	Juliet Sefton	New Common Era sea-level reconstructions from southeastern Australia
<b>Southern Ocean</b>	11:00	Greer Gilmer	Using peat to reconstruct Holocene climate change at Motu Ihupuku/Campbell Island (52°S)
	11:15	Werner Nel	Climatic drivers of deglaciation at two southern Indian Ocean islands during Marine Isotopic Stages 3 and 2
	11:30	Yuhao Dai	Deglacial polar Southern Ocean carbon release driven by physical and biological dynamics
	11:45	Molly Husdell	Paleoenvironmental changes from offshore Cape Darnley, East Antarctica, over the last 500 ka, including super-interglacials MIS 5E and MIS 11
	12:00	Zhifei Duan	Deepwater circulation change in the South China Sea during the last glacial cycle
Lunch	12:15		
	1:00	Field trip	<b>What to bring:</b> Water bottle, Sunhat and sunscreen, Wind/water proof (can be a bit windy) Binoculars to look at wildlife
	<b>TBC</b>		<b>Public Talk</b>
Dinner	6:00		

Thursday 27<sup>th</sup> June

Session/ Convenor	Time	Speaker	Title
Keynote	8:30	Haidee Cadd	Climate, humans, fire and megafauna – key drivers of Australian subtropical vegetation change
<b>Hydroclimate</b>	9:00	Jonathan Tyler	Hydroclimate variability in Australia through the last 2000 years: a critical review of progress and priorities
Amy Prendergast	9:15	Mahfuzur Rahman	Hydroclimate variability of South Australia over the last 2000 years inferred from high-resolution oxygen isotope records
	9:30	Caroline Mather	Tufa records of Holocene hydroclimate and freshwater availability at Murujuga rock art province
	9:45	Gregory Webb	Changing hydroclimate on the Darling Downs, Queensland: new evidence from dated Holocene tufa
	10:00	Darren Ray	Southern Hemisphere Common Era climate - are there enough palaeo-proxies?
Morning Tea	10:15		
Caroline Mather	10:45	Paul Hesse	Hydrological Regime of Australian Lakes Over the Late-Quaternary and Holocene
	11:00	Chloe Stringer	Growth and geochemistry ( $\delta^{18}\text{O}$ and $\delta^{13}\text{C}$ ) of freshwater mussels as high-resolution hydrological proxies of Ngintait and Latji Latji Country, Central Murray River Basin
	11:15	Amy Prendergast	Palaeoenvironmental context for Palaeolithic hominins in the Levant from multi-proxy analyses of gastropod shells
	11:30	Teresa Dixon	Hydroclimate variability in the eastern Kimberley, Australia, since the last deglaciation
	11:45	Gwen Ferguson	Age and paleoenvironments of the Simpson Desert lakes: Preliminary findings from a playa lunette.
	12:00	Calla Gould-Whaley	Hydroclimate of Australia's southern arid margin during human arrival: insight from subaqueous speleothems
	12:15	Fletcher Nixon	Palaeoclimate in Australia's arid interior: Insights from clumped isotope analysis
Lunch	12:30		
<b>Quat for Management</b>	1:30	Heather Haines	Arid zone dendrochronology of the widespread and ecologically critical Mulga tree
Annika Herbert	1:45	Nashley Griffiths	Palaeoenvironmental context for the restoration of traditional land management in McLaren Vale, South Australia
	2:00	Alexander Francke	Holocene vegetation and European settlement controls erosion on Kangaroo Island (Karti/Karta), South Australia
	2:15	Maame Adwoa Maisie	Twentieth Century change in the fire regimes of the Blue Mountains of NSW as recorded in the accumulation and character of charcoal in Temperate Highland Peat Swamps
	2:30	Johanna Hanson	An environmental reconstruction of Te Whakaraupō   Lyttelton Harbour
	2:45	Margot Schneider	Pollution history and anthropogenic-induced increase in the transport of toxic metals from Australia to the Southern Ocean islands
	3:00	Joaquin Spinelli	The Argentine pampas during the late Quaternary: sensitivity to climate change
Afternoon tea	3:15		<b>Poster session</b> - see list of posters next page
Micha Campbell	4:30	Andy Baker	The speleothem proxy - the view from groundwater recharge monitoring
	4:45	Pauline Treble	The speleothem fire record: outcomes from a Discovery Project
	5:00	Kym Edwards	Oxygen isotope ratios in plant phytoliths as a proxy for past climates and environments



	5:15	Vanessa Nowinski	East Asian Monsoon response to abrupt climate change during the last ice age: Evidence from the sediments of Lake Suigetsu, Japan
	5:30	Zuorui Liu (online)	High-resolution paleoenvironmental reconstructions of MIS 3 Central Europe from oxygen and carbon isotopes from mammal teeth
	5:45	Russell Drysdale (online)	Hydroclimate changes during Termination I from a Tasmanian stalagmite
Dinner	6:00		
AQUA Quiz	7pm		At the Straddie Brewing Company, Dunwich

#### Thursday 27<sup>th</sup> June – Poster Session presentations

Presenter	Title
Chloe Stringer	Freshwater reservoir effect investigation for the lower and central Murray River
Eleanor Steele	Source-bordering linear dunes record post-LGM hydroclimate in Mithaka Country, northwest Kati Thanda (Lake Eyre) Basin
Ellen Corrick	Key considerations in developing precisely dated uranium-thorium chronologies from speleothem
Greer Gilmer	Fiordland Assessment of Climate, Environment and Tectonics (FACET): Report from the ICDP workshop
Hesam Z. Ghoochaninejad	High-resolution Holocene hydroclimate reconstruction from Tongan stalagmites
Jasper Knight	Quaternary landscape evolution in the arid interior of Northern Cape, South Africa
Lachlan Young	A 5000-year history of New Zealand's climate through multiproxy stalagmite analysis
Lydia Mackenzie	Dating sediments from the Australian alpine Lake Albina
Micheline Campbell	Exploring a speleothem fire severity signal using coeval stalagmites from southwest Australia
Nashley Griffiths	Organic Molecular biomarkers as proxies for past temperature from Australian lake sediments
Nikita Rohalskyi	Investigating South Pacific climate dynamics during the Holocene using multi-proxy stalagmite records (Atiu, Cook Islands)
Patricia Gadd	ANSTO's Mighty Itrax – Serving Australia and beyond!
Stephanie Ius	Classification Scheme for Quaternary Source Bordering Sand Dunes Based on Sediment Characteristics

## Friday 28<sup>th</sup> June

Session/ Convenor	Time	Speaker	Title
Keynote	8:30	Rob Markham	TBC
<b>Archaeology</b>	9:00	Tiina Manne	New investigations of the Clybucca - Stuarts Point midden complex in partnership with the Ngambaa Aboriginal Corporation
Heather Haines	9:15	Michael Westaway	Testing the Dark Emu hypothesis: archaeological and palaeoecological research in Mithaka country
	9:30	Julien Louys	Geological controls on the preservation of hominin presence on the modelled route through SE Asia
	9:45	Gilbert Price	Megafauna amongst the mangroves: a mass death assemblage of giant Pleistocene marsupials in the Pilbara, Western Australia
	10:00	Nathan Jankowski	A revised chronology and depositional history for the Outer Arumpo lunette, Willandra Lakes Region World Heritage Area, NSW.
Morning tea	10:15		
<b>Landscape</b>	10:45	Alysha Jones	Stratigraphy of a Late Quaternary Low-Angle Fan-Delta Complex, Lake George basin, NSW.
Greer Gilmer	11:00	Levente Laczko	Characterising Morphologic Change Within a Distributive Fluvial System – a Case Study of the Lachlan River, SE Australia
	11:15	Nicholas Roberts	Updating the ‘Glacial Map of Tasmania’
	11:30	Timothy Barrows	Long-term stability of the northern Antarctic Peninsula ice sheet
	11:45	Timothy Barrows	Conference closing and prizes and nominations to host next AQUA conference
Lunch	12:30		