

Centre for Biodiversity Analysis Workshop

Historical Gene Expression and Epigenetic Analysis of Ancient and Museum Specimens

10–12 November 2026
Diversity Building · CSIRO Black Mountain campus

Ancient and museum specimens offer exciting opportunities to investigate gene expression and epigenetic variation through time. This workshop brings together researchers and collections specialists to explore emerging capabilities, share expertise and identify the questions we can begin to address together.

Over the next two days, we will discuss current approaches, develop shared research priorities and explore the specimens, methods and partnerships needed to advance them. We aim to establish a clear direction for a collaborative research consortium.

Invited Keynote Speakers



Associate Professor Nic Rawlence
Director of the Otago Paleogenetics Laboratory, University of Otago

Dr Rawlence's research applies palaeoecological and paleogenetic approaches to reconstruct prehistoric ecosystems and examine how ecosystems responded to (or in some cases didn't respond) to dynamic geological, climatic, and human impacts across New Zealand and the Pacific. His work increasingly integrates ancient and functional genomics to investigate evolutionary adaptation, ecological change, and trait evolution in extinct and extant island taxa.



Dr Emilio Mármol Sánchez
Postdoctoral Fellow, University of Copenhagen

Dr Mármol Sánchez specialises in bioinformatics, biostatistics, genomics, and transcriptomics, with a particular interest in RNA biology and gene regulatory networks. His current work focuses on developing and optimizing laboratory and computational approaches to study RNA molecules in archival and ancient biological sources, while also applying a multi-omics approach to investigate how population dynamics and genetic load shape the epigenetic landscape and genomic architecture of extinct and extant endangered species.

Feel free to reach out to your hosts with any questions:
Dr Clare Holleley – Group Leader of Vertebrate Collections, CSIRO – clare.holleley@csiro.au
Dr Erin Hahn – Australian National Wildlife Collection Research Scientist, CSIRO – erin.hahn@csiro.au
Dr Claire Stephens – Centre for Biodiversity Analysis Coordinator, ANU – claire.stephens@anu.edu.au

We gratefully acknowledge our sponsors:

Centre for Biodiversity Analysis

ANU BIOMOLECULAR RESOURCE FACILITY

Covaris® a PerkinElmer Company

Program

Day 1 Tuesday 10 November

Current capacity, shared interests and research opportunities

TIME	SESSION AND DETAILS
9:00–9:30	**Arrival, registration and coffee**
9:30–9:50	**Welcome and scene setting** Clare Holleley· Group Leader of Vertebrate Collections, CSIRO
9:50–10:00	**NRCA Director Address** Anthony Whalen · Director of the National Research Collections Australia
10:00–11:00	**Keynote Presentation** Nic Rawlence - Director of the Otago Paleogenetics Laboratory, University of Otago *Back to the future in ecosystem reconstruction: from ancient mitogenomes to functional genomics*
11:00–11:30	**Morning Tea**
11:30–12:15	**Research Session 1: Old specimens, new tricks**
11:30–11:45	Erin Hahn – Australian National Wildlife Collection, CSIRO *Unlocking the temporal multi-omics potential of formalin-fixed museum specimens*
11:45–12:00	Livia Gerber – Australian National Wildlife Collection, CSIRO *What to learn from your dragon: a tale on life history and history*
12:00–12:15	Carl Vangestel – Royal Belgian Institute of Natural Sciences *From museum collections to epigenomes: investigating shell morphological variation in Tectarius striatus*
12:15–1:00	**Research Session 2: Research snapshots**
12:15–12:25	Martha Sears & Sarah Steatfeild – The National Museum of Australia
12:25–12:35	Alicia Grealy – Australian National Herbarium, CSIRO
12:35–12:40	Ina Smith – Biosecurity, CSIRO
12:40–12:45	Ko-Huan Lee – Biosecurity, CSIRO
12:45–12:50	Carol Hartley – Agriculture & Food, CSIRO
12:50–1:00	**Workshop Dinner Sponsor Presentation** Lachlan Morrison – Biomolecular Resource Facility, Australian National University
1:00–2:00	**Lunch**
2:00–2:20	**Discussion Session 1: Who's in the room?**
2:20–3:20	**Breakout Session 1: Exploring common interests**
3:20–4:00	**Afternoon tea**
4:00–4:45	**Discussion Session 2: Finding common ground**
4:45–5:00	**Day 1 wrap-up**
From 6:00	**Workshop dinner** Fellows at Uni House

Day 2 Wednesday 11 November

Developing priorities and building the consortium

TIME	SESSION AND DETAILS
9:00–9:15	**Day 2 welcome**
9:15–10:15	**Keynote Presentation** Emilio Marmol-Sanchez - Postdoctoral Fellow, University of Copenhagen *From DNA to RNA and beyond: Towards a multi-omics approach applied to quaternary and historical museum collections.*
10:15–11:00	**Research Session 3: Research snapshots**
10:15–10:30	Pranav Adithya Senthilkumar – TIGRR Lab, University of Melbourne
10:30–10:35	Anna Kearns – Australian National Wildlife Collection, CSIRO
10:35–10:45	**Covaris-sponsored ECR Travel Bursary Awardee** Imogen Dumville – University of the Sunshine Coast *Influence of faecal microbiome on chlamydial disease in the koala*
10:45–10:50	Andrea Cabrito Rubau – Institut de Ciències del Mar, CSIC *Pre-recorded talk*
10:55–11:00	Emma Harding – University of Oxford *Pre-recorded talk*
11:00–11:30	**Morning Tea**
11:30–12:45	**Breakout Session 2: Developing priority areas**
12:45–1:45	**Lunch**
1:45–2:30	**Discussion Session 3: From ideas to opportunities**
2:30–3:00	**Discussion Session 4: Who is missing?**
3:00–3:30	**Afternoon tea**
3:30–4:15	**Discussion Session 5: Consortium structure and next steps**
4:15–4:30	**Closing discussion**

Optional collections tour Thursday 12 November

Visit the National Research Collections

TIME	SESSION AND DETAILS
9:30–11:00	**Diversity Building tour of the National Research Collections** Please meet in the Diversity Foyer
11:00–11:30	**Morning Tea**

Getting to the Workshop



Ground Floor Seminar Room
Diversity Building 803
Dickson Way, CSIRO Black Mountain campus
Acton, ACT 2601

Our venue

The Diversity Building is part of CSIRO's National Research Collections precinct, home to the Australian National Wildlife Collection (ANWC), Australian National Insect Collection (ANIC) and Australian National Herbarium (ANH). The precinct brings together our specimens, curatorial expertise and molecular research capabilities, supporting new approaches to studying Australia's biodiversity.

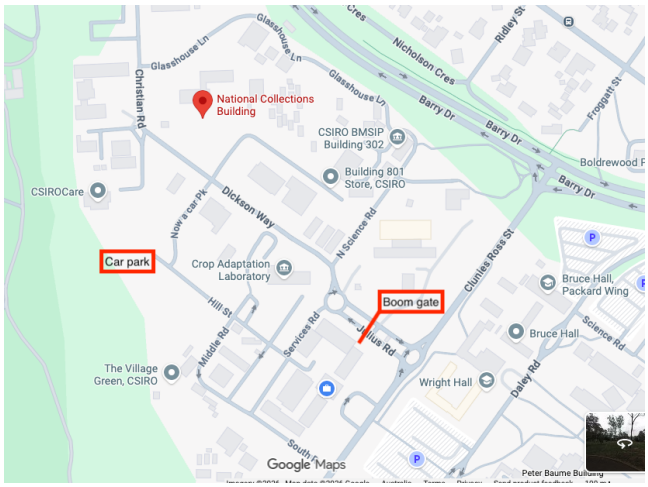
On arrival

Please meet in the Diversity Building foyer for sign-in and coffee from 9:00 am on Tuesday 10 November. The workshop will take place in the Ground Floor Seminar Room.

If you need any assistance finding us, please contact **Erin Hahn: erin.hahn@csiro.au 0415 885 292**

Finding the Diversity Building

As our recently opened showpiece National Collection's building, Diversity is not yet on Google Maps. However, you will find us by searching for the National Collections Building.



By taxi/ride-share
Your driver can drop you off at the Main Reception Building on Clunies Ross Street. Please do not check in at reception. Continue on foot up Julius Rd to Dickson Way and you'll find Diversity on the right-hand side.

By car
There is parking on site if you are driving yourself. Enter the site from Clunies Ross Street and proceed to the boom gate. Press the call button and let Reception know that you're attending a workshop at the Diversity Building. You can then proceed up Julius Road to Dickson Way. Turn left immediately after the library (opposite Diversity, marked 'Now a car Pk' on the map above) and park beyond the open boom gates. Accessible parking is available just in front of the boom gates.

By bus
The nearest bus stop is on Barry Drive near the Clunies Ross Street Intersection. We recommend walking along Clunies Ross and entering the site at Julius Road. Continue on foot up Julius Rd to Dickson Way and you'll find Diversity on the right-hand side.

Workshop Dinner @ Fellows Bar & Café, Sponsored by BRF



Following the workshop activities on Tuesday, we will make our way by foot or communal car to Fellows at UniHouse on the ANU campus. Thanks to a generous sponsorship by the BRF and CBA, food will be provided by the workshop; drinks are at your own expense.

General Canberra Information

The following sites can be useful for those of you from out of town:

https://www.transport.act.gov.au/getting-around (information on local buses and cycling in Canberra)

https://www.parks.act.gov.au/ (information on urban parks, nature reserves and national parks in the ACT)

http://www.visitcanberra.com.au/ (what's on in town while you are here)