

Canterbury Branch of the Royal Society of New Zealand Te Apārangi March 2024 Newsletter

Dear Member,

We hope you have all had a pleasant summer break and are looking forward to 2024.

Firstly, I apologise for the mishap with last month's newsletter. For those who did not receive it, please let me know and I'll send it to you.

So, I am looking forward to the rest of the year, and things that are being thought about and to be accomplished.

We are investigating producing podcasts as a way of connecting with students and early career researchers on topics that are relevant to them, and other subjects. More will be revealed at the AGM. We will look at holding public talks in Christchurch, Ashburton, and Timaru, either hosting them ourselves, or in conjunction with other organisations, and we will hold more field trips, two of which are already planned (see below). We intend to engage with more groups and organisations, to build relationships with stakeholders, and to increase our public profile. We also plan to continue adding to our webpage so that people can join, pay, and donate on-line, and we hope to digitise most of our records.

This year we will review our constitution and re-register the Branch under the new Incorporated Societies Act and implement the draft Strategic Plan once we have your views on it. We will complete the Memorandum of Understanding with the RSNZCB Trust and build up the funds in the RSNZ Endowment Fund.

As I said to our Council recently, we have the pieces, now we, working with the you the members, must build the picture to make the Branch the pre-eminent respected and independent science, technology, and humanities organization in Canterbury.

Branch Annual General Meeting

20 March 2024 7.00pm

Ara Institute of Canterbury Madras Street campus

Room W210 (see the Ara campus map at the end of this newsletter)

We will hold the branch AGM on Wednesday 20 March and welcome anyone interested in being on the Branch Council to put their name forward so that they can be nominated.

Our current Secretary, Rob has informed us that he will be retiring, so we are on the lookout for a new Secretary. We normally meet every month, usually in person spring to autumn with winter meetings held by Zoom, but all meetings do have a Zoom link.

Also, it would be great to have a newsletter/social media person. There are big plans for this year and maybe you know someone who could do something along these lines, and is willing to help?

After the meeting we will have coffee and discuss some of the things planned for this year. This will include what you would like the Branch to do now, and in the future, as this will help us to finalise the draft Branch Strategy Plan, which Krishna has put a lot of time into. We can also discuss any changes we might need to make to our constitution under the new Incorporated Societies Act.

Long lost but now found

We now have our own banner. It had been mentioned that the Branch did have its own banner, but its whereabouts was unknown. Well, it's been found and returned to us. Amazingly it was found in a storeroom at RSNZ in Wellington.

Students travel grants awarded

William Dixon

5th year University of Otago Christchurch Medical Student

Presenting on behalf of Department of Surgery, University of Otago Christchurch.

Oral Presentation: A new option for reconstruction with a biological graft in Aotearoa
2024 VSAoNZ Conference

Look out for his report in a future newsletter.

Reports from previous recipients

Nicky Slater

2023 Annual Meeting of the Australasian Cognitive Neuroscience Society

27 – 30 November 2023

I am a final year PhD candidate at the University of Canterbury in the School of Psychology, Speech and Hearing. For my PhD study I am examining the association of the integrity of brain cholinergic neurons, which play an important role in learning, memory and thinking, and cognitive impairment in Parkinson's disease using diffusion-weighted magnetic resonance imaging (MRI). I am based at the New Zealand Brain Research Institute (NZBRI) in central Christchurch where I have been fortunate to have access to the rich dataset collected through the NZBRI New Zealand Parkinson's Progression Programme (NZP3).

I was very grateful to receive a Canterbury Branch Royal Society of New Zealand travel award to support my travel to the 2023 Annual Meeting of the Australasian Cognitive Neuroscience Society at the University of Sydney from 27th to 30th November 2023. The



meeting was attended by approximately 400 cognitive neuroscientists, and I had the opportunity to interact with researchers from Australia, Europe, the United States, and other Asia Pacific nations.

At the meeting I presented a talk titled “Structural integrity of cholinergic pathways associated with executive function networks in Parkinson’s disease”. This focused on one chapter of my thesis where I have considered the structural integrity of cholinergic input to cortical brain regions associated with executive functioning, such as planning, working memory, and attention, in Parkinson’s disease related cognitive impairment.

Presenting my research to an audience of cognitive neuroscientists provided an amazing opportunity to share my work, ponder insightful questions, and gain valuable feedback for further refinement of this research and for development of future projects.

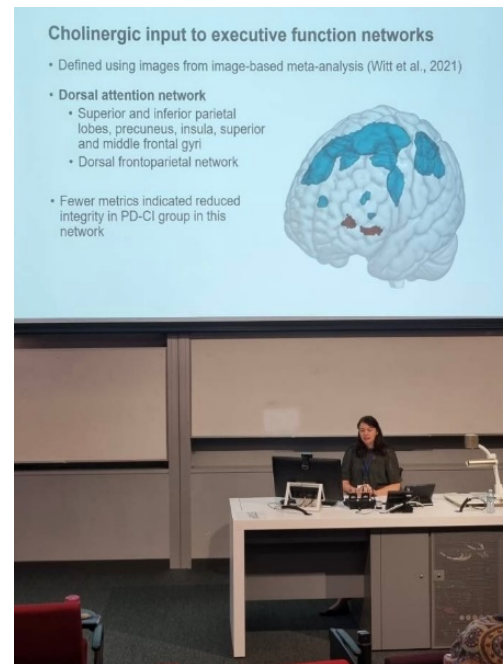
I gained significant value from numerous presentations I attended at the meeting, including several other talks on the brain cholinergic system. The meeting also provided opportunities to network with other attendees which were of great benefit as I move beyond my PhD into a career in neuroscience research where I am hoping to expand on my PhD research.

Thank you again for the financial support which made my attendance at this meeting possible.

**Jean-Louise Roberts, Master of Science (Conservation and Ecology), Lincoln University
Presenting at the Australasian Wildlife Management Conference (AWMS) in Melbourne, 5-7 December 2023**

I was recently lucky enough to travel to Melbourne to present at the 2023 Australasian Wildlife Management Society Conference, enabled to do so through receiving a travel grant from the Canterbury Branch of RSNZ. This was a 3 day conference, during which I presented a 5 minute talk on my research at Lincoln University, where I have been evaluating brushtail possum movement and removal success in sea-cliff habitat on Banks Peninsula.

AWMS is a conference that focuses on research across both Australia and New Zealand evaluating a wide range of wildlife management projects, practices and future directions, with this year’s theme being ‘Conservation amidst conflict’. There was great discussion around some of the hurdles that face those working in conservation, namely public support and opinion surrounding management methods, how to build effective projects with limited funding that achieve ecological targets and the additional challenges set by the changing climate. With my research feeding heavily into the goals of the Predator Free New Zealand



2050 strategy, this was the ideal setting in which to learn more about how to set a framework and goals that are guided by ecological boundaries to create a successful outcome.

My project has been undertaken alongside Pest Free Banks Peninsula (PFBP), with data collection being focused into two parts. The first was using 24 tracking collars attached to possums in Nīkau Palm Gully (located on the headlands past Akaroa) to establish home range size, what type of habitat they are utilising the most, determining common den sites and evaluating nightly distances covered by individuals. The second part worked with PFBP's bait station operation to determine encounter/interaction rates of possums with the bait stations, evaluate individual possum encounters to see if any trends emerged and confirm whether current network spacings are effective at targeting this population. Initial results indicate very small home-ranges (due to a very dense possum population) but post control camera detections and mortality signals off the tracking collars have shown the bait station operation to be very successful in removing this initial population.



The experience of attending this conference was invaluable for me, both from gaining insight into how conservation works in another country alongside making connections with others working in the same space as myself. I also attended a fieldtrip day on Phillip Island, giving me a practical context for some of the work being done and the challenges that Australian conservation is facing. Some of these challenges have also given me a new appreciation for the environment I work in, and the goals New Zealand as a nation is aiming towards when protecting our native species.

Branch talks, field trips, and related activities

Christchurch talks

On 22 May, we will be supporting another great activity, **Cafe Scientifique**. Celebrate International Biodiversity Day with an amazing line-up of guest speakers at Foundation Café on the ground floor of Tūranga Library, 6.00-7.45 pm.

Timaru talks

Nothing planned for 2024 yet, but watch this space!

Upcoming field trips

As was mentioned in the last newsletter, we now have two field trips confirmed...

Saturday 23 March at 2pm

The Cotter Medical History Museum

Christchurch Hillmorton Hospital Campus

Their collection, containing the largest number of historical medical artefacts in New Zealand was designated by Te Papa as being of National Significance. The Branch has given a Science Promotion Grant to the Cotter Medical Trust as a contribution to microscope collection purchase. There are books and other items that can be purchased by cash only. If you are interested in going, please let me know at r.fagg@xtra.co.nz by March 14 as spaces are limited.

Note: the museum is soon moving so this will be the last chance to see it at its current site.

Tuesday 23 April at 6pm

Bridge of Remembrance with Dr Garry Morrison, Head of Classics, University of Canterbury

In 2022, Dr Morrison gave us a fascinating talk regarding the Bridge of Remembrance, not so much on the architecture or history, but the story behind its inscriptions, and the debates around them. Come to the bridge and find out about these, and a few of the connections between the bridge and antiquity. If you are interested in going, please let me know at r.fagg@xtra.co.nz by 12 April as spaces are limited to 15 and afterwards you can share a coffee/meal (venue to be decided and PYO) with Dr Morrison.



CC BY-SA 4.0 Michal Klajban

CANTERBURY
BRANCH

ROYAL
SOCIETY
TE APĀRANGI

From other branches and RSNZ Te Apārangi

28 March, Lincoln

[Kim Hill Hot Topic PLASTIC: How do we live with it?](#)

Kim Hill CRSNZ will lead a panel of experts to delve into the issues surrounding plastic usage. The panellists will discuss all issues relating to how essential plastic might be, our ability to reduce consumption, and our means of recycling the plastic we use.

Once the panel has deliberated their views, the audience will be invited to question panel members.

Panellists:

- **Rob Wilson** | Operations Manager, EcoCentral
- **Rachel Barker** | CEO, Plastics New Zealand
- **Professor Ian Shaw** | University of Canterbury
- **Professor Gavin Lear** | University of Auckland

The evening is always a well-attended stimulating and enjoyable occasion; all are welcome! [Register](#).



Finally

You can keep updated by on the branch's Facebook page Canterbury RSNZ Branch or twitter @CanterburyRSNZ.

If have any suggestions for speakers, field trips ideas, or even contribute something in the newsletter please contact us and I am always willing to discuss anything regarding the branch with you.

Roger Fagg
Branch President
C: 0272497325
E: r.fagg@xtra.co.nz

Links to articles of interest

[How to balance farming and solar power](#)



Last year, France passed a law to prevent fertile land being used to harvest lucrative solar energy at the expense of crops. To comply with the new rules, solar projects must provide some sort of service to agriculture — such as [putting panels above crops to provide temporary shade or shelter](#) from hail and night frosts. “Crops don’t use all the Sun’s rays. Their needs depend on life cycle, and some stages need less light than others,” says agronomist Christian Dupraz. Researchers have been investigating ‘agriphotovoltaic’ approaches for decades, but the systems still trigger debate about the right balance between electricity yields and crop yields.

[Great ‘Stone Age’ wall discovered](#)



A string of boulders almost a kilometre long, now covered by the Baltic Sea, [could be Europe’s oldest human-made megastructure](#). Researchers say the “pristine” discovery was probably used for hunting the Eurasian reindeer more than 10,000 years ago. Before it was submerged by rising sea levels about 8,500 years ago, hunters might have used the wall to force prey into a bottleneck or a nearby lake.

[200 years of dinosaurs](#)

On 20 February 1824, William Buckland [reported](#) his findings on the ‘Megalosaurus or great Fossil Lizard of Stonesfield’ to the Geological Society of London. Hypothesized to have “a length exceeding 40 feet and a bulk equal to that of an elephant seven feet high”, *Megalosaurus* was the first dinosaur whose description was formally published. It was not long before ‘dinosaur mania’ took hold, notes [a Nature Ecology & Evolution editorial](#) — and the fascination continues.



Soon afterwards, a dinosaur star was born: *Tyrannosaurus rex*. As part of the bicentennial celebration, palaeontologist Stephen Brusatte admits — slightly sheepishly — that *T. rex* is his favourite too, and [examines the enduring appeal of the lizard king](#).

Controversies dog the dinos, too. The Brazilian Society of Palaeontology has recently taken steps to become more involved in the repatriation of fossil specimens — a central issue in the global palaeontological community as interest in combating scientific colonialism grows. [Members of the society discuss their experiences](#), including the challenges they have faced and how they have overcome them, in the hope of inspiring other scientific societies to play their part.

[Enjoy the full 200th-anniversary collection of news, opinion and research here](#)

[AI’s environmental costs are soaring](#)

Within years, artificial intelligence (AI) systems could need as much energy as entire countries. A first-of-its-kind US bill would [create a framework for reporting the technology’s environmental costs on a voluntary basis](#) — but given the urgency of the situation that’s not enough, says AI scholar Kate Crawford. Incentives for creating energy-efficient systems and using renewable energy are needed, she says, supported by regular environmental audits.

City Campus 130 Madras Street



Departments

Applied Sciences and Social Practice	S
Ara Connect (Computing For Free)	X
Art and Design	D
Beauty Therapy	PX, JX
Business	A
Cookery and Bakery	U
Creative Industries	D
Computing	S
Early Childhood Education	N
Engineering and Architectural Studies	K
English Language	A
Enterprise & Digital Innovation	A
Fashion	C
Hospitality and Tourism	U
Hairdressing and Barbering	PX
Music Arts	JZ
NASDA (National Academy of Singing and Dramatic Arts)	E
Next Step Centre for Women	W
New Zealand Broadcasting School	TV, P
Outdoor Education	HS
Photography	D
Supported Learning (Workskills)	W
Te Puna Wānaka (Maori and Pacific Studies, Japanese)	TM
Teacher Education	A

Services & Facilities

Academic Records	A
Admissions and Enrolments	X
Career Centre	X
Centre of Assessment for Prior Learning (CAPL)	A
Childcare Facilities	CH
Citizens Advice Bureau	HS
Disability Services	L
English Exam Centre	A
Gym	W
Health Centre	W
Information Desk	X
International Student Advisors	X
ICT Helpdesk	T
Learning Self Access Centre (LSAC)	L
Learning Services	L
Library	L
Osteopathic Clinic	O
Printery	T
Scholarships Office	X
Security (ID cards, lost and found)	OH, OEDT
Student Accommodation (Ōtautahi House)	OH, OEDT
The Zone	W
Visions on Campus Restaurant	U

Administration & Support Divisions

Academic Division	A
Custodians	FM
Engagement (Youth & Community, Business Development)	G
Executive	G
Facilities Management	FM
Finance	G
Health & Safety Manager	G
People & Culture	G
International	G
Inwards Goods	FM
Marketing	G
Research	A
Student Voice	C
Student Advisor, Wellbeing	C
Student Events	C

Venues	
DL Block Lecture Theatre	DL
Imagitech Theatre	A
Plains FM	P
Rakaia Centre	X
Student Lounge	C
Visions on Campus Restaurant	U
Whareora	W

KEY

	Admissions & Enrolments, Information Desk
	Accessible Carpark/Building
	Student Carpark
	Staff Carpark
	Covered Secure Cycle Compound
	Motorcycle park
	AED (Defibrillators)
	Health Centre
	Bus Stop*
	Café
	Evacuation Points
	Accessible Entrance
	Lift

*Please check with MetroInfo for the latest bus information.

Ph 03 940 8000 | 0800 24 24 76

ara.ac.nz