



## Canterbury Branch Royal Society of New Zealand Te Apārangi September 2024 Newsletter

Dear Member

We hope all is well with you. Daylight saving has begun, so Summer is coming. Did you know that Ancient civilizations adjusted daily schedules to the sun more flexibly than DST does, often dividing daylight into 12 hours regardless of daytime, so that each daylight hour became progressively longer during spring and shorter during autumn and that New Zealand never changed the 1/2hr it added in the Second World War, thus retaining the 12hr difference between NZ and London.

This month's newsletter includes information about the November PM Science Winner talk in Christchurch, Canterbury Westland Schools Science Fair, updating the branch constitution, and our podcast plans.

### The Prime Minister Science winners talk.

The branch in partnership with Royal Society Te Apārangi, the Prime Minister's Science Prizes Secretariat, and the University of Otago Christchurch, Professor Parry Guilford FRSNZ and Associate Professor Karyn Paringatai, both from Ōtākou Whakaihu Waka | University of Otago in Christchurch and Timaru.

The award was for an innovative partnership between members of the McLeod whānau and their community, cancer geneticists from the University of Otago, and clinicians from Tauranga Hospital. Together they identified a genetic mutation (in the CDH1 gene) that was causing members of the McLeod whānau to die from stomach cancer at a young age.

Over sixty attended in Christchurch and about 15 in Timaru. Many thanks to all who helped, the University of Otago who provided the venue in Christchurch and Ara in Timaru.

Photographs from both talks.



Timaru



Christchurch

The next talk in Christchurch will be the Prime Minister Science winner in Science Communication, Prof Ben Kennedy from the University of Canterbury.

Tuesday, November 12th at 6.30 pm

Venue Ara Institute of Canterbury City Campus Rakaia Block Atrium.

Ben's talk is titled **The Silly and Serious Sides of Volcano Science Communication.**

### Description



The Prime Minister's Science Prizes and Royal Society Te Apârangi in partnership with the Canterbury Branch are delighted to offer a free talk by Professor Ben Kennedy, 2023 winner of the Prime Minister's Science Communication Prize.

As a science communicator, Ben has had some very varied experiences from the absurd to the terrifying. Although his comfort zone has always been making volcano fart jokes with 7 year olds, he is now a Professor in Volcanology at University of Canterbury, and part of a National Science Advisory Group and is an expert witness in ongoing legal proceedings involving the Whakaari White Island tragedy.

In Ben's presentation he will recount tales of some of the most diverse science communication scenarios he has been engaged in and the unique challenges associated with each. He will give examples from working with sensationalizing TV documentaries at erupting volcanoes, international interviews following the Whakaari tragedy, kids TV programs in front of live audiences, public talks in bars, school visits, legal proceedings and visits from policemen.

Ben will also emphasize the importance of his science communication whânau including a diverse team of collaborators including artists, cultural advisors, scientists, students, educators, family and engineers. All welcome.

Registration details coming soon.

Note that tea/coffee will be at 6.30 pm and the talk at 7.00 pm and parking is free after 5.00 pm.

## Canterbury Westland School Science Fair

The Canterbury Westland School Science Fair was held last weekend. Thanks to Sally, Fiona, who helped with judging, and Rob as the branch contact. The branch provides three prizes, Y7/8, Y9/10, and Y11/13.

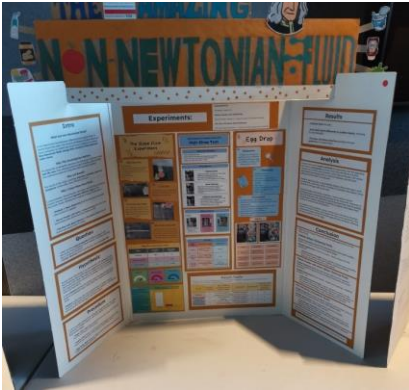
Photos of the winning project are below.

Y7/8 winner

**Title: The Amazing Non-Newtonian Fluids**

Description: Different Non-Newtonian Fluids and their application in real life.

School: Breens Intermediate

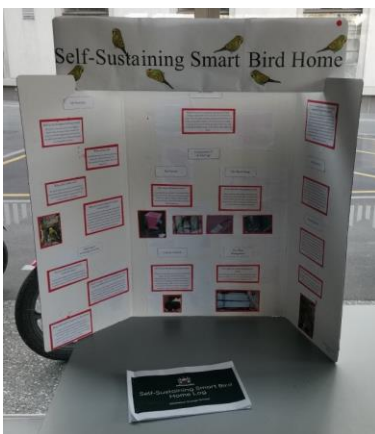


Y9/10

**Title: Self-Sustaining Smart Bird Home**

Description: Birdcage that is fully autonomous and can feed the bird, give the bird clean water, adjust the climate of the cage to suit the bird, and dispose of the bird's waste.

School: Middleton Grange School

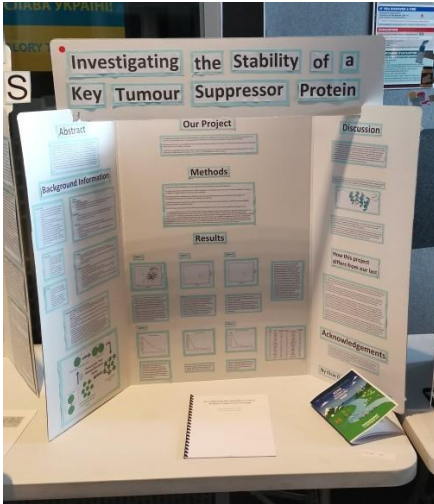


Y11/13

**Title: Investigating the Stability of Key Tumour Suppressor Protein**

Description: The aim of this experiment was to investigate which amino acids during the oxidation of p16 were first affected by the dimerisation of the protein, which leads to the formation of amyloids. Following our learning from our previous project, with Dr. Christoph Goebi, we hypothesized that the amino acid first affected by the dimerisation of p16 would be cysteine, due to the disulfide bond it forms with another cysteine in a different p16 in the process of oxidation. This disulfide bond is the process of the oxidation of p16 therefore cystine is expected amino acid to be first affected.

School: Lincoln High School



## **Students travel grants.**

**Awarded.**

None

**Reports from grant recipients.**

None

## **Letter of thanks from the NZ Entomology Society**

Kia ora Roger,

We held a hugely successful NZ Entomology conference last week. Over 100 delegates showed up in Ōtautahi Christchurch at the Town Hall for three days of conferencing from the 28th-30th of August.

We had two public events associated with the conference, the poetry night at Little Andromeda on Wednesday night, which you sponsored, and an 'Inverteblitz' in the red zone on Friday night. Both were well attended and well received.

I just wanted to reach out and say a huge thank you to you and Canterbury Branch of the RSNZ for providing sponsorship for the conference. Without your support, this conference is very expensive to run. The sponsorship we receive helps to make this a student-friendly conference, so we are extremely grateful.

The society plugged all the sponsors in social media post on Facebook, so please feel free to reshare.

The person shown in the attached photo from the event is entomologist and poet Robert Hoare, who works for Manaaki Whenua in Auckland and was one of our featured poets, along with locals Gail Ingram and Robinne Weiss. We also had an open mic with 11 contributors, and the event was brilliantly hosted by local poet Claudia Jardine. The place was packed, reaching the full capacity of Little Andromeda at 90 people, and I've heard that other conferences are considering following our lead with poetry nights of their own, so I think you've helped us to start a trend.

Again, we really appreciate the support!

Ngā mihi

Rob, on behalf of the NZ Entomological Society



## University Library member access

Don't forget once you have paid your branch sub and received a receipt you can join the Library at Lincoln or Canterbury Universities. Lincoln Library has a fee for the membership card of \$30.00 but is waiving the first 10 members who join the membership card fee. There are only a few free membership cards available, so if you want to join, please do so soon or it will cost you \$30.00 for the card.

Each library provides similar access to their collection, borrowing time, etc., and restrictions to periodicals, etc. as set by the publisher's access rights. These can be explained to you on applying for a card.

## Branch Constitution

As mentioned in the last newsletter, the council is reviewing the constitution, if you have any thoughts regarding any changes you like to see, please let us know. We plan to have a revised Constitution out for your consideration by Christmas and ready for approval at the Annual General Meeting next year.

## Branch Podcast

Amit, Paul (from Ara), and I had a meeting with Pia from Plains FM and we have come up with a plan to see our first series of podcasts for next year. The subject will be AI, with subtopics covering education, health, community involvement, etc. Amit Grant and Paul are working as the lead team. However if you have thoughts, or like to have input please let them know.

As mentioned the branch, the branch purchased its digital audio recorder, and as a trial recorded Dr Samuel Mehr's talk. Paul has listened to the recording, which was of high quality, which is great.

We had a presenter/interviewer suggested to us at the meeting and are waiting to hear from them, to see if they are interested.

Once we are up and running we have many opportunities for the podcasts, like recording our talks planned for next year, interviewing the grant travel recipients, and maybe some of the Schools Science Fair participants, which after talking to some at last week's fair, are keen to contribute and see it happen.

This is one of the areas that we hope the podcasts will reach, the school students and Early Career Researchers.

But we will need to provide more than just travel grants and podcasts and the council will be working on this in the coming months, to reach out to them next year.

If you have any ideas on how or want to be involved in this please let us know.

## Link and Alert newsletters

<https://www.royalsociety.org.nz/fellows-and-members/link-news/2024/july/>

Don't forget you can subscribe to the RSNZ Te Apārangi weekly Alert newsletter shares events, news, and opportunities for those interested in exploring and discovering knowledge or reading past issues at <https://www.royalsociety.org.nz/whats-happening/alert-newsletter/>.

## Upcoming Branch talks, field trips, and related activities

### Christchurch talks

#### November

#### **Prof Ben Kennedy University of Canterbury, The Prime Minister's Te Puiaki Whakapā Pūtaiao Science Communicator 2023.**

Ben will give a talk on his love of sharing his passion for volcanoes with children, why volcanoes erupt and, (2) what are the best ways to learn and teach about planet Earth. His research is driven by trans-disciplinary and novel collaborations between Science, Education, Engineering, and Arts.

Date: Tuesday 12<sup>th</sup> November

Time: 6.30 pm

Venue: The Atrium Ara Institute of Canterbury City Campus

#### **GSNZ Canterbury Branch' 2024 GSNZ Hochstetter Lecture:**

David Barrell, The Sea Versus the Land – Will there be a Winner?

Just to let you know that this year the Hochstetter Lecture for the Canterbury Branch will take place on Wednesday 16 October at 6 pm in room 213 (Brian Mason Room), in the Ernest Rutherford Building on UC's Ilam campus.

David's lecture will explore forthcoming changes to Aotearoa's coast, and underscore scientific questions, the pathway of discovery and enquiry, and what it means in wider contexts of Zealandia's geological, tectonic, and landscape evolution. The presentation will be framed as a case example of how years of robust observations address important scientific questions and yield thought-provoking results.

Aotearoa New Zealand is the largest emergent part of the mainly submerged Zealandia continent.

Plate-boundary tectonic deformation is responsible for Aotearoa's ongoing emergence, and its margins are constantly under attack by waves in the vast surrounding ocean. Aotearoa's landscape reflects an interplay between the rock foundations, the climate which gives precipitation to drive erosion and the river transport of sediment, and wave energy in the coastal zone which distributes the sediment once it reaches the sea. Perspectives of 'whole system' processes and mass/energy budgets, coupled with eustatic ebb and flow of the sea across the continental shelf through glacial/interglacial climate cycles, provide an integrated approach for explaining the form of Aotearoa's landscape and behaviour of its river systems.

This talk will explore the battle between sea and land, from the deep geological past through to modern times, and interpret the richly varied form of our coastline, from the long sweeping cliffs of some places, and indented bays and estuaries of others. Whole-system perspectives will be used to discuss likely coastal changes in coming decades to centuries under changing climate

Date: Wednesday 16 October

Time: 6:00 pm



Location: Brian Mason Room, ER213, Ernest Rutherford Building, UC Ilam Campus

## Timaru talks

### Upcoming field trips

We are still waiting for a date to visit the University of Canterbury Campus to learn about the restoration of the waterways that flow through the campus, past, present, and into the future. Also, we believe the new Geo-garden at the campus will be opened by then so we might add this to the visit. We will limit this to 20, so if you want to come, email [r.fagg@xtra.co.nz](mailto:r.fagg@xtra.co.nz)

And don't forget our CO2 monitor you can borrow. Contact us and we'll arrange for you to pick it up. A guide to recommended CO2 measurements can be found at <https://www.rnz.co.nz/news/in-depth/470690/whose-breath-are-you-breathing>.

All we ask in return is that you post your findings on either the branch's Facebook page or Twitter.

As you can read, the branch and council have a lot coming up in the next few months, as well as plans to launch a podcast and work with other groups to bring exciting opportunities to Canterbury and of course, our members, if you want to help us, please contact us, your input will be valued.

## From other branches and RSNZ Te Apārangi

### From Royal Society Te Apārangi

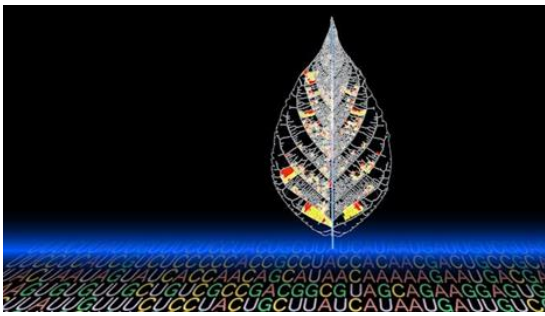


#### 59 jobs to go at GNS

An employee who has lost his job in cuts at GNS Science says looking for a new job is a scary prospect. GNS Science has confirmed it will cut 59 roles. It's a small reduction from the 66 net roles GNS Science proposed cutting in July.

Krystal Gibbens @RNZ

<https://www.rnz.co.nz/news/national/528963/59-jobs-to-go-at-gns-science>



### NZ's government plans to lift a ban on gene tech outside the lab – here's what people think

Discussions about the rules governing genetic technology in New Zealand remain complex. But they need not be marked by conflict, as long as people's views and values are genuinely considered.

Marie McEntee, Fabien Medvecky, Marcus Rongowhitiao Shadbolt, Melanie Mark-Shadbolt, Micheal Heimlick and Vicki Macknight  
@The Conversation

[https://theconversation.com/nzs-government-plans-to-lift-a-ban-on-gene-tech-outside-the-lab-heres-what-people-think-239707?utm\\_medium=email&utm\\_campaign=Latest%20from%20The%20Conversation%20for%20September%2024%202024%20-%203106831703&utm\\_content=Latest%20from%20The%20Conversation%20for%20September%2024%202024%20-%203106831703+CID\\_24919a7c9af65412567179fdc1cc03b2&utm\\_source=campaign\\_monitor&utm\\_term=NZs%20government%20plans%20to%20lift%20a%20ban%20on%20gene%20tech%20outside%20the%20lab%20%20heres%20what%20people%20think](https://theconversation.com/nzs-government-plans-to-lift-a-ban-on-gene-tech-outside-the-lab-heres-what-people-think-239707?utm_medium=email&utm_campaign=Latest%20from%20The%20Conversation%20for%20September%2024%202024%20-%203106831703&utm_content=Latest%20from%20The%20Conversation%20for%20September%2024%202024%20-%203106831703+CID_24919a7c9af65412567179fdc1cc03b2&utm_source=campaign_monitor&utm_term=NZs%20government%20plans%20to%20lift%20a%20ban%20on%20gene%20tech%20outside%20the%20lab%20%20heres%20what%20people%20think)

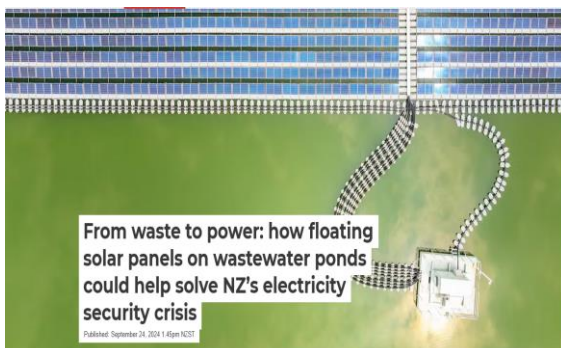
["Hawke's Bay Scientists on Air" radio broadcasts](#), which we support, now go to air each second Monday after the 10:00 am news.

"Talking About" is the Otago Institute's podcast series. It features topical conversations about anything and everything from the worlds of Arts, Sciences, and Mātauranga Māori.

<https://oar.org.nz/oi-podcast/>

## Other items of interest

### From The Conversation



Faith Jeremiah, Lincoln University, New Zealand  
With more than 200 wastewater ponds, New Zealand has an untapped opportunity to install floating solar panels to increase renewable generation and to reduce algal growth in the ponds at the same time.

Read more at [From waste to power: how floating solar panels on wastewater ponds could help solve NZ's electricity security crisis](#)





### ESO telescope captures the most detailed infrared map ever of our Milky Way

Astronomers have published a gigantic infrared map of the Milky Way containing more than 1.5 billion objects — the most detailed one ever made. Using the European Southern Observatory's VISTA telescope, the team monitored the central regions of our Galaxy over more than 13 years. At 500 terabytes of data, this is the largest observational project ever carried out with an ESO telescope.

The release, images and videos are available on:

<https://www.eso.org/public/news/eso2413/>

### From The Conversation



Rewi Newnham, Te Herenga Waka — Victoria University of Wellington

Māori used all parts of raupō for weaving and food, but the plant also kept lakes healthy. This connection between cultural and ecological roles means its fate is closely linked with people.

Read more here [The common raupō once kept NZ's wetlands and lakes thriving – now it could help restore them](#)

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

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

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