



**Royal Society of New Zealand  
Canterbury Branch**

---

**2019  
ANNUAL  
REPORT**

---

# Contents

## *Officers, Representatives and AGM:*

Officers and Council 2019 .....	1
Representatives of the Branch .....	2
Notice and agenda of the 2020 Annual General Meeting .....	2
Minutes of the 2019 Annual General Meeting .....	3

## *Financial Reports:*

Treasurer's Report .....	5
Statement of Financial Position .....	6
Royal Society of NZ Canterbury Branch Trust .....	6
Statement of Financial Performance .....	7
Auditor's Report .....	9
Financial Policies .....	8

## *Branch activities:*

President's Report .....	9
2019 Programme .....	12
Travel and Research Awards 2019, Science & Technology Fair awards .....	12, 13

## *Representative's Reports:*

Canterbury Museum Trust Board .....	14
Riccarton Bush Board of Trustees .....	15

## *Membership:*

Branch Membership 2019 summary .....	16
--------------------------------------	----

## **Officers and Council 2019**

*President:* Alec Ford

*Vice-President:* Dr Kelly Duncan

*Past-President:* Dr Rob Cruickshank

*Honorary Secretary:* *vacant*

*Honorary Treasurer:* *vacant*

*Council:* Anna Pilbrow, Mike Reid, William Godsoe, John Clemens,  
Roger Fagg

## **Representatives of the Branch**

Canterbury Museum Trust Board: Assoc. Prof. Rod Syme

Riccarton Bush Board of Trustees: Professor David Norton

# 2020 Annual General Meeting Notice

Notice is given of the 2020 Annual General Meeting of the Royal Society of New Zealand, Canterbury Branch, to be held at 6.30pm on Wednesday, 30 September, 2020, in the Sydenham Room, South Library, 66 Colombo St, Christchurch.

## Agenda

- 1 Roll, Apologies and Proxy Votes.
- 2 Minutes of the Annual General Meeting held on 25 September, 2019.
- 3 Business Arising.
- 4 2019 Reports from Council and Representatives.
- 5 2019 Financial Reports.
- 6 Appointment of Auditor.
- 7 Election of Officers and Council.
- 8 Subscriptions.

Council recommends the following motion as included on the Proxy vote form:

To set the 2020 subscriptions to zero and to extend the membership of those financial members from 2017 to 2018 to the current year.

## 9 General Business:

To discuss matters around the changes in the arrangements for the RSNZ Canterbury Branch Trust and the Relationship to Branch finances.

The transfer of the RSNZCB Trust into the UC Foundation is the most likely outcome of changes in progress at the University of Canterbury investment arrangements and this meeting will be a chance to explain these in more detail. This is an opportunity to update some of the directions in the current trust deed to reflect the changing situation in the last 30 years. The Foundation would take on distributing the travel grants reducing the workload on the Branch council. It could also be an opportunity to put some of the Branch's own investments (cash and ANZ Shares) into the fund within the UC Foundation but specifying that those funds can continue to support Branch activities. This would be a better way to invest those funds in the long term and reduce the load on the Branch treasurer.

# Minutes: 2019 Annual General Meeting

Minutes of the 2019 Annual General Meeting of the Royal Society of New Zealand, Canterbury Branch, held at 6.30pm on Wednesday, 25 September, 2019, in the Sydenham Room, South Library, 66 Colombo St, Christchurch.

## 1. Roll and Apologies:

*Apologies:* Margaret Austin, Judith Roper Lindsay, Robin Mann, Sally Price. Pat Campbell, Rod Syme, Will Godsoe, Jeremy Hornibrook.

*Proxies received:* Roger Keey, David Eddy, John Mckinnon, Craig Sixtus, Judith Varga, Robin Mann, Wynard Verwood, Ian Forne, Martin Kennedy, David Pepperle, Peter Sharr (*Alec Ford*); Deborah Errington, John Errington (*Kelly Duncan*); John Packer, Fay Jackson (*Mike Reid*); Margaret Austin (*Tony Mander*).

*Present:* Don McAra, Jill McAra, Davinia Didham, Rob Cruickshank, Langtree Davis, Kelvin Duncan, Tony Mander, Roger Fagg, John Campbell, Nigel Newman, John Clemmens, Paula Jamieson, Mike Reid, Anthony Wright, David Reynolds, Phil Bones, Ian Duff, Glenys Duff, Brian Molloy, Angela Hyde, Jeff Hyde, Helen Pugh, John Peet, Alec Ford.

## 2 Minutes of the Annual General Meeting held on 18 April, 2018:

*Motion:* that the 2017 AGM be taken as a true and accurate record. Rob Cruickshank/David Reynolds. *Passed.*

## 3 Business Arising: None, other than arising below.

## 4 2018 Reports from Council and Representatives:

*Motion:* That the reports from Council and representative be taken as read. Rob Cruickshank/Anthony Wright. *Passed.*

## 5 2018 Financial Reports:

*Motion:* that the 2017 financial statement be accepted. Rob Cruickshank/Kelly Duncan. *Passed.*

## 6 Appointment of Auditor: David Reynolds said that he was willing again subject to “still being above ground”. *Motion:* That David Reynolds be appointed auditor. Brian Molloy/Alec Ford. *Passed.*

## 7 Election of Officers and Council: There was a discussion, all 2018 council were willing to continue. Alec Ford was willing to take on president again but more as administrative president letting others to get along with other plans especially those with ideas to keep the Branch going in some way. John Clemmens expressed a willingness to join council.

*Motion:* That the current council members (Mike Reid, Kelly Duncan, Anna Pilbrow, Will Godsoe, Roger Fagg and with Alec Ford as President) with the addition of John Clemmens be elected *en masse*. John Campbell/Tony Mander. *Passed.*

Rob Cruickshank remains as past president.

**8 Subscriptions:** There was some discussion. The motion on the proxy form to carry over membership and have a zero subscription was not put to the meeting. An alternative motion was put setting the subscription to previous levels: *Motion:* that the subscriptions be \$45 for Ordinary members, 35 for retired, both discountable by \$5 for prompt payment and student subscription be \$5. Anthony Wright/(unrecorded). *Passed.*

**9 General Business:**

*Travel Grants:* Sally Price said that there were no travel grants from Lincoln in 2018 and perhaps they could be better advertised. Alec Ford commented that supervisor knowledge was likely an important factor in students applying. The scheme runs at a level offering \$1500–\$2000 per year which is about the annual income from the trust capital and we could be flooded with more advertising and have then to reassess our criteria.

*Future directions:* There was considerable discussion. Roger Fagg reported that he was well on the way to arranging some talks in Timaru – council had previously allocated some money to support that. Kelly Duncan had some prepared notes for the discussion about the future discussion followed.

*Motion:* That the Branch keep up. Phil Bones/ (unrecorded). *Passed.*

It was agreed that the next AGM would be at a more normal time of year and council would report back on the above issues.

**Meeting Closed 8:15 pm**

# Financial Reports

## Treasurer's Report for the 12 Months to 31 December 2019

*Statement of Accounting Policies and Comment on the Financial Performance.*

- 1 **General accounting policies:** The measurement base adopted is that of historic cost, reliance is placed upon the fact that the Society is a going concern.
- 2 **Particular accounting policies:**
  - a) Shares are valued at market value at 31 December 2019.
  - b) These accounts have been prepared on a GST inclusive basis.
  - c) No provision is made for taxation, as the Branch is exempt.
- 3 **Changes in accounting policies:** There have been no changes in accounting policies this year. The 2019 accounts have been reviewed by David Reynolds and his report is included on page 9.
- 4 **Investment in Royal Society of NZ Canterbury Branch (RSNZCB) Trust:** The University of Canterbury administers the Trust and distributions to the branch are included as indicated in the Travel and Research Fund report. The fund records a gain of over \$42,000 for 2019 after the static return in 2018 This fund is available for encouraging and assisting travel and research by young scientists.
- 5 **Travel and Research Awards Uplifted in 2019:** See page 12 for a list of recipients. Some individual recipient reports are a separate supplement to this report.
- 6 **Summer Scholarship Grants:** No summer scholarship were offered this year.
- 7 **Liabilities:** A grant of \$2,000 to the Cotter Trust made in 2011 towards the purchase of a microscope collection was uplifted in 2019 leaving no outstanding liabilities.
- 8 **General Expenses and Administration:** Again operating expenditure was considerably reduced from previous years due to limited branch activities. There was some income from subscriptions and some members paid arrears and there were a few new members in spite of our lack of activity. Our interest income and dividends supplement other income so we have a surplus of over \$2000 in the general account before the change in value in our shares of just over \$16,00 is taken into account. We chose to fund travel grants from reserve funds and not to make a withdrawal from the trust fund to fund travel grants so the Travel and Research fund records a loss this year and was in deficit at the end of the year.
- 9 **Preparation of the 2019 Accounts:** The accounts are presented in the same format as last year, although some items have been added or removed as appropriate.

*Alec Ford, Branch President/De-facto Treasurer.*

## Statement of Financial Position for the Year to 31 December 2019

2018	Assets	2019
\$2,617.65	BNZ Cheque	\$ 5,401.72
\$1,383.57	BNZ Call	\$ 67.06
\$41,462.74	BNZ Term Deposits	\$26,638.80
—	Paypal account	—
\$28,509.00	Shares (market value 31 Dec)	\$30,127.25
\$73,972.96	Totals Assets	\$62,234.83
	<b>Liabilities</b>	
\$2,000.00	Sundry Creditors	—
<b>\$71,972.96</b>	<b>Net Assets at 31 Dec</b>	<b>\$62,234.83</b>
	<b>General Fund</b>	
\$79,688.86	Opening Balance from 31 Dec	\$73,557.54
(\$6,131.32)	Operating (Loss) Surplus for the year	\$3,861.87
<b>\$73,557.54</b>	<b>General Fund Balance at 31 Dec</b>	<b>\$77,419.41</b>
	<b>Travel and Research Fund</b>	
\$13,065.42	Balance at 1 Jan	(\$1,584.58)
(\$14,650.00)	Operating (Loss) Surplus for the year	(\$13,600.00)
<b>(\$1,584.58)</b>	<b>T&amp;R Balance at 31 Dec</b>	<b>(\$15,184.58)</b>

## University of Canterbury Trust Fund

Account Number 93260: Royal Society of NZ Canterbury Branch Trust

Balances as at 31 December 2019

*Final/ Audited*

		2019 Fiscal Year
		\$ Total
<b>1 Jan</b>	<b>Balance</b>	<b>421,205.98</b>
	Additional Income	0.00
	Expenses	0.00
		421,205.98
	<b>Apportionment of Distribution (Loss)/ Gain</b>	18,954.27
	<b>CPI Adjustment to Base Capital</b>	8,002.91
	<b>Revenue Reserve</b>	15,645.36
<b>31 Dec</b>	<b>Balance</b>	<b>463,808.52</b>

**Notes:** Apportionment of (Loss)/ Gain has been undertaken as per the terms of the Statement of Investment Policy and Objectives.

*Pauline Stephens, Senior Accountant, 12 March 2020*



## Statement of Financial Performance: Year to 31 December 2019

2018	General Fund	2019
	<b>Income</b>	
\$450.00	Subscriptions	\$105.00
\$1,769.63	Dividends	\$ 2,282.07
\$1,369.05	Interest	\$1,179.35
<b>\$3,588.68</b>	<b>Total Income</b>	<b>\$3,566.42</b>
	<b>Expenditure</b>	
\$734.05	General Expenses & Admin	\$275.00
\$7.00	Bank Charges/Paypal fees	\$4.80
—	RSNZ Constituent Body Meetings	—
—	Donations, Grants & Prizes	—
\$582.00	Newsletters & Annual Report	\$793.00
\$163.80	Meetings	—
\$2,250.00	Honoraria	\$250.00
<b>\$3,736.85</b>	<b>Total Expenses</b>	<b>\$1,322.80</b>
<b>(\$148.17)</b>	<b>Operating Surplus (Loss) for the year</b>	<b>\$2,243.62</b>
<b>(\$5,983.15)</b>	<b>Gain (Loss) in Share Market Values</b>	<b>\$1,618.25</b>
<b>(\$6,131.32)</b>	<b>Total Surplus (Loss) for the year</b>	<b>\$3,861.87</b>
	<b>Income</b>	
—	Members Donations	—
—	RSNZCB Trust	—
—	<b>Total Income</b>	—
	<b>Expenditure</b>	
\$13,400.00	Travel & Research Awards paid	\$13,000.00
\$250.00	Admin/Honoraria	—
\$1,000.00	Grant/Science Fair	\$600.00
<b>\$14,650.00</b>	<b>Total Expenditure</b>	<b>\$13,600.00</b>
<b>(\$14,650.00)</b>	<b>Total (Loss) Surplus for the year</b>	<b>(\$13,600.00)</b>
<b>(\$20,781.32)</b>	<b>Overall (loss)/surplus both accounts</b>	<b>(\$9,738.13)</b>

## RSNZ Canterbury Branch Audit Report

### *To Whom It May Concern*

This will confirm that I have examined the meeting minutes and financial statements of the Royal Society of N.Z. Canterbury Branch for the year ended 31-12-19. The activities and consequent financial dealings are entirely appropriate to the constitution and give every confidence that they are a true and accurate statement of what has taken place.

*D.G.Reynolds, Auditor, 11 March 2020*

## **Financial Policies**

### **Overall Position**

Our annual accounts show an overall loss for the year. There was a loss in the travel and research as we chose not to make a withdrawal from the trust fund. There was a small recovery in the value of our shares mainly due to the rise in our Fisher & Paykel Healthcare shares. We had some income from subscriptions in spite of carrying over memberships from last year. Our expenditure on regular activities was considerably reduced due to little activity.

### **General Account**

The general account showed a gain as interest and dividends exceeded expenditure. Dividends increased a little on last year but interest dropped slightly due to interest rates dropping and withdrawals from Term Deposits.

### **Travel and Research Account**

The branch operates a scheme to help young researchers attend national and international conferences. The scheme is funded, in part, from donations members make with their subscription. This year, a total of 12 travel awards were funded, a small drop from 2018. The Trust was established through generous donations from members and has been administered by the University of Canterbury as part of its combined trust registered with the charities commission as “University of Canterbury Trust Funds” (registration number CC45255). This Trust supports the Student Travel and Research Account from which grants are made to provide partial funding for postgraduate students to attend conferences and undertake research in other locations throughout New Zealand and overseas.

### **Assets**

This report lists our financial assets only. For many years the Branch has owned a tea trolley containing urns, teapots, plates and other associated wares, located in the kitchen of the central lecture block at Canterbury University. We also own several filing cabinets containing our records. All are regarded as having no value.

### **Internal Financial Management**

Council manages the finances of the Branch with internal checks and procedures. All monies received are deposited into the cheque account. We wrote no cheques in 2019 and electronics transfers require two to authorise. The Treasurer provides a financial report including a list of all payments to Council meetings and these appear in Council minutes.

### **Auditing**

The annual accounts for 2019 have been reviewed by David Reynolds and are presented in the annual report for member’s approval.

# President's Report 2019

At the 2019 AGM I took on the job as Branch President again with the clear indication that it would be for the task co-continuing to try and sort out issues with the Royal Society of New Zealand Canterbury Branch (RSNZCB) Trust but that it would be up to others who wanted to keep the Branch going in some form to take that on. In this report I have the task of covering the 2019 calendar year, but as events have unfolded I need to report on what has happened with the Trust in 2020.

I had the feeling that we drifted a little in 2019. It seemed very difficult to find chances for Council to meet and that made it difficult to get much done. No talks or events were organised for the year and our AGM was delayed. The Christchurch Mosque shootings resulted in the postponement and then cancellation of Christchurch speakers from the Royal Society. It has become difficult for us to get any access to University of Canterbury venues and this didn't help inspire us. We did manage to keep the travel grants going and they are reported elsewhere in this report. After a break of a year we again participated in the Canterbury-Westland NIWA Science & Technology Fair and this is reported on page 13.

Those of you who were at the AGM or compare the proxy motions to the minutes recorded will see that the actual motions put at the meeting differ. Particularly the motions to carry over membership without subscriptions was changed to levy a subscription. You will have realised that no subscriptions have been levied. I had collated the proxy votes and am confident that had the original motion been put it would have passed. In the end the income from dividends and interest has more than paid the expenses for the year and no subscriptions were needed for the year.

The issue that has vexed us for the last several years has been how to vary the existing RSNZ Canterbury Branch Trust deed to handle Branch funds should they end up there by a possible winding-up of the Branch. As it has transpired our slow progress has been rendered irrelevant due to changes at the University of Canterbury and the way they handle the trusts administered by them. The new Auditor General looked at the Universities combined trust scheme and deemed that they should be consolidated into the University accounts. The problem for us has been that the RSNZCBT was deemed to be one of four of those 150 or so trusts to have external control and could not be included. Initially the solution proposed for those four trusts was that the University could no longer administer them and that the funds be returned to the relevant organisations. That caused some angst on council as to how we should proceed however the situation has changed recently. The University now proposes that the combined trusts be merged into the UC Foundation. In the opinion of the lawyer for the University the RSNZCB Trust can be part of this process.

This process that will run into next year will begin with an application to the High Court and then the Solicitor General. It's likely we will be able to add some document to update to how the Trust as a fund within the UC Foundation should be used perhaps to reflect the change circumstances since the initial Trust was established. I had some initial reservations about having the RSNZCB Trust funds going to the UC Foundation as we were initially told that they could only be used within the University of Canterbury. Subsequent discussions have resolved that they can also be used for Lincoln University which is far more satisfactory for continuing the travel grants. Our travel grants scheme would then likely be administered by the UC Foundation and we now need to have some discussions on this. It remains to be seen how the UC Foundation responds to the requirements of the 2019 Trusts Act for more openness and public disclosure of its activities and the grants it makes.

If, for some reason, the RSNZCB Trust cannot be transferred into the UC Foundation I'm not sure where we go; however the lawyer for the University is confident. Once the process is complete we will need to update the winding-up clause of the constitution which makes the Trust the beneficiary on any winding up of the Branch. A general discussion on all these matters will be an item for the AGM agenda.

We did leave the 2019 AGM in September meeting with a promise to have the 2020 AGM closer to the usual time but these were thrown awry by the lockdown and restrictions due to Covid-19. I expected that had I taken on the role of Branch President again for six months or so that things could be sorted in that time, but fate has decreed otherwise. We chose a similar date again this year to reflect that we would be moving into warmer weather. Hopefully with no return to Covid 19 crises the 2021 AGM can return to a normal time and I'm expecting that the issues around the Trust fund would be closer to resolution.

2019 was local body election year and so came the time for the Branch to make the appointment of a new representative to the Canterbury Museum Trust Board. Thanks are due to Rod Syme for his years of service and detailed reports to us and to wish him well in his retirement. Looking at our membership as a pool for a replacement I have to say most of us no longer spring chickens. When our Past-President Rob Cruickshank expressed an interest and we looked at his credentials we wondered how we could find a better candidate. He did his PhD. at the Natural History Museum in London. After 15 years lecturing where he published over 50 peer reviewed papers he left Lincoln University in 2017. Rob now works for the Christchurch City Libraries and has an ongoing interest in the GLAM (Galleries, Libraries and Museums) Sector. We think he will be able to make an excellent contribution as our new representative.

The long term future of the Branch and in what form is not clear. Over my years

on Council I have seen people come and go with different priorities and how they could contribute to the Branch. The generation for whom the travel grants were an important part of Branch activities have passed. This need to change the Trust arrangements while difficult for Council is a chance to set up something new so that the intent of the original gift can continue in a more resilient way. Freed from that task and the associated financial responsibilities maybe a Branch with a narrower focus can survive.

I would like to finish with some special thanks. Firstly to Anna Pilbrow. Having been treasurer some years ago Anna stayed around to help effectively as assistant treasurer to help with our payments. Since moving from cheques to electronic payments we have required a second authorisation for each payment, which has been Anna. Secondly is to Tony Mander. After many years Tony retired from Council at the last AGM and with that his position as newsletter and annual report editor. This year he has again stepped into the breach to edit this annual report and to do it in a new way making it easier to distribute as a PDF document.

*Alec Ford*

## 2019 Programme

There was no lecture programme in 2019. Travel & Research Awards continued and prizes awarded at the Canterbury-Westland Science and Technology Fair.

### Travel & Research Awards 2019

*Note: Awards are listed in chronological order of conference dates; only grants uplifted in 2019 are included. A supplement of some of the travel reports submitted by recipients is included with this report.*

**Ross Waters**, ME, Civil and Natural Resources Engineering, University of Canterbury. Poster/Paper: *Hydraulic Fracturing through Widely Graded Dam Core*. Geo-Congress 2019, Philadelphia, United States. 24–29 March, 2019. \$1,000.

**Jono MacIntyre**, PhD, Civil and Natural Resources Engineering, University of Canterbury. Poster: *Equivalent Fire Severity in Steel Structures*. Interflam 2019, Royal Holloway College, Nr London UK. 1–3 July 2019. \$1,000.

**Channell Thoms**, PhD, School of Biological Sciences, University of Canterbury. Oral: *Feeding and habitat preferences in streams of the endemic New Zealand freshwater mussel (kakahi – Echyrydella sp.) and insights into translocation*. SEFS 11 Symposium for European Freshwater Sciences, Zagreb, Croatia. 30 June–6 July 2019. \$1,000

**Jana Wold**, PhD, Conservation, Systematics and Evolution Research Team, School of Biological Sciences, University of Canterbury. Oral: *A novel approach to investigate the relationship between genome structure and reduced male fitness in critically endangered birds*. International Congress for Conservation Biology (ICCB), Kuala Lumpur, Malaysia. 2–25 July 2019. \$1,000

**Hannah Sim**, Final Year (Year 6), Medical Student, University of Otago, Christchurch. Oral: *Samoan, New Zealand and Nepalese medical student perspectives regarding global health learning within their curricula*. Association for Medical Education Europe (AMEE) Conference, Vienna, Austria. 24–28 August 2019. \$1,000

**Bee Bathish**, PhD, Department of Pathology and Biomedical Science, University of Otago, Christchurch. Oral: *Modifications of the extracellular matrix by peroxidase*. The 11th International Human Peroxidase Meeting, Brno, Czech Republic. 4–7 September 2019. \$1,000

**Jenny Hamilton**, PhD, Psychology Department, University of Canterbury. Poster: *Immediate early gene expression in the acquisition and retrieval of odour-object and odour-trace-object association memory in intact rats*. 48th Annual General Meeting of European Brain and Behaviour Society (EBBS), Prague Congress Centre, Prague, Czech Republic. 21–24 September 2019. \$1,000

**Deborah Paull**, MSc, School of Biological Sciences, University of Canterbury. Oral & Poster: *The Milk Protein Project: Reducing the Allergenicity of*

*β-lactoglobulin*. International Genetically Engineered Machine (iGEM), Boston MA USA. 31 Oct–4 Nov 2019. \$1,000

**Claudia Allen**, MSc, School of Biological Sciences, University of Canterbury. Oral & Poster: *The Milk Protein Project: Reducing the Allergenicity of β-lactoglobulin*. International Genetically Engineered Machine (iGEM), Boston MA USA. 31 Oct–4 Nov 2019. \$1,000

**Kate Wright**, MSc, School of Biological Sciences, University of Canterbury. Oral & Poster: *The Milk Protein Project: Reducing the Allergenicity of β-lactoglobulin*. International Genetically Engineered Machine (iGEM), Boston MA USA. 31 Oct–4 Nov 2019. \$1,000

**Jake Seeley**, MSc, School of Biological Sciences, University of Canterbury. Oral & Poster: *The Milk Protein Project: Reducing the Allergenicity of β-lactoglobulin*. International Genetically Engineered Machine (iGEM), Boston MA USA. 31 Oct–4 Nov 2019. \$1,000

**James Ramsay**, PhD, Dept Mechanical Engineering, University of Canterbury. Oral: *Reducing drag by non-uniform suction control*. APS Division of Fluid Dynamics Meeting, Seattle, United States. 23–26 Nov 2019. \$1,000

## **Canterbury/Westland NIWA Science & Technology Fair 2019**

Once again, the Canterbury Branch Royal Society of New Zealand supported the annual science fair this year with judges and prizes. Held at the Rutherford Building, University of Canterbury, on Saturday 21 September. Branch judges Judith Varga, John Campbell and Roger Fagg considered nearly 100 exhibits that suited the Branch criteria of projects that showed excellence in experimental design, approach and interpretation.

After interviewing the students, the following were awarded prizes of \$200 each:

**Masha Poulter, Year 7, Selwyn House School: *Kill'em Kwik***. To find an affordable and effective everyday item with low environmental impact that can kill weeds.

**Sylvie King, Year 8, Selwyn House School: *Street Light Fright***. The impact varying degrees of street light have on native flora.

**Emma Taylor, Year 11, St Margaret's College: *The impact of ocean acidification***. Exploration of how the pH (ranging from 7.0 to 8.6) and temperature (ranging from 20 °C to 60 °C) of the surrounding solution affects the concentration of calcium carbonate that is leached out from green-lipped mussel shells in order to investigate the impact of ocean acidification and climate change.

*The judges also awarded one Highly Commended prize:*

**Skyler Morrison & Rosie Cruickshank, Year 9–10, Cashmere High School: *Total Recall***. An investigation into whether the recall of spoken text is affected by the gender of the speaker.

# Representative's Reports

## Canterbury Museum Trust Board

*Rod Syme*

In my first report, following appointment in 2005 as the Royal Society's representative on the Canterbury Museum Trust Board, I indicated that the ongoing saga of the revitalisation project had been a major focus. I quote "As seems so typical of such projects, it has been a roller-coaster ride and the way forward is still far from clear. It is a credit to the museum director, Anthony Wright, and his staff that the museum continues to provide such a fine service to Christchurch and the wider Canterbury community in the face of the frustrating ongoing delays in redevelopment of the working and display spaces." Sadly, fourteen years later, the same statement still applies! Certainly over that period there has been very significant revision of the revitalisation project, but the ongoing delays have been frustrating. As I recall it the 2005 project was estimated to cost around \$32m. Following the Environment Court and High Court decisions in 2006 a revised proposal, costed at \$68.7m, was developed and was about to be launched in October 2009, but earthquakes intervened. As reported in *The Press* on 1 Feb 2020, subsequent redevelopment plans, now including earthquake proofing of the 1870 Category 1 buildings, with a cost estimate of \$195m, are awaiting a decision on major central Government funding. I do hope that Rob Cruickshank, as my replacement on the Board, sees significant progress of the project.

Despite the matters outlined above, the museum continues to offer a high-quality experience to visitors by way of both special exhibitions and the regular displays, and continues to support a number of active research projects by curators and research fellows. A significant change in my time on the Board has been the development of online access to information about the Museum collections and exhibitions. 2019 saw in excess of 765,000 visitors to the Museum and *Quake City*, the second busiest year ever. The expectations for *Quake City* in its new Durham Street North location were substantially exceeded. A special exhibition of particular interest this year, produced by the Museum team working in partnership with the Antarctic Heritage Trust, was *Breaking the Ice: The First Year in Antarctica*, telling the story of the Southern Cross expedition, the men who built the continent's first buildings and who were the first people to winter over on the ice. This exhibition is now available online. Also very popular was *Arctic Voices*, describing the wildlife and people of the Arctic, co-produced by Science North, one of Canada's largest and most respected science centres, and the Canadian Museum of Nature. Of particular scientific interest was publication of some startling discoveries arising from the work of avian palaeontologists, Senior Curator Natural History Dr Paul Scofield and Research Curator Natural History Dr Vanesa De Pietri, who are international experts in their



field. They have been collaborating with colleagues in New Zealand, Australia and Germany for many years in understanding the evolution of birds in New Zealand. News of a giant parrot, nicknamed *Squawkzilla* by scientists, identified from fossils found at St Bathans, Central Otago, captured world-wide attention, as did fossils from a 1.6-metre-high monster penguin and a bird with bony teeth found near Waipara, North Canterbury. A special exhibition describing these discoveries opened in December.

I have greatly appreciated the opportunity and challenge of serving as the Branch appointee on the Canterbury Museum Trust Board, but the time has come to pass the baton.

## **Riccarton Bush Board of Trustees**

*Professor David Norton, School of Forestry, University of Canterbury*

This report is written in my role as the Canterbury Branch of the Royal Society of New Zealand representative on the Riccarton Bush Trust Board and covers the 2019 calendar year. I must say at the outset, that it has been and continues to be a real privilege to be part of the Trust Board and I am very appreciative of the Canterbury Branch for appointing me. To follow in the illustrious footsteps of people like Brian Molloy and Charles Foweraker is an honour.

I have been an active Board member and was able to attend all but two of the Trust Board meeting in 2019 (the two that were missed were because of clashes with other meetings). I also chaired two meetings of the Bush and Grounds Subcommittee in 2019.

The Board dealt with a wide range of issues over the year, and while I am actively involved in all of these, I have a particular focus on those relating to the bush (Pūtaringamotu) itself and the house grounds. One key issue from the perspective of the bush during 2019 has been working with Matapopore in developing a design strategy for interpretation of the bush. As a Board, we decided in 2018 to prioritise replacement of all of the existing tracks in the bush with boardwalk and saw redevelopment of interpretation as important part of this process. The work with Matapopore took longer than we had anticipated and we are now planning to start the process of seeking funding for redeveloping both the track network and the associated interpretation material in 2020.

Another important issue that has become a major concern for the bush has been the rapid increase in the abundance of rock pigeons. CCC staff have undertaken three rounds of bird monitoring in 2004/2005, 2008/2009 and 2018/2019 involving 12 monthly walking surveys in each sample period. Rock pigeons were absent in the first survey and only recorded once in the second. However, in the latest survey they were recorded 136 times! It seems that this alarming increase

in rock pigeon numbers is a direct result of the 2011 Christchurch earthquake which dislodged them from their coastal cliff nesting sites (which were destroyed). The presence of many derelict buildings in the city helped sustain high numbers with large numbers of birds now nesting in Riccarton Bush where they are likely damaging trees and displacing other birds. While our ranger has been shooting birds on a semi-regular basis, we have joined discussions led by Christchurch Airport and others affected by pigeons (University Canterbury, DHB, prisons, CCC, etc.) to explore developing a coordinated approach to deal with this problem—these discussions are ongoing but the problem is certainly by no means just ours.

3 August 2020

## Branch Membership

At 31 December 2019:	2019	2018	2017	2016	2015	2014
Life members (Life)	2	2	2	2	2	2
Ordinary members (Ord, FamO)	75	72	73	88	90	104
Retired members (Retd)	54	61	60	82	89	96
Student members (Stud)	1	1	0	1	2	11
Total members	132	136	135	173	183	216

*See the 2018 Annual Report for the membership list.*

## Constitution

See the 2018 Annual Report for the **Constitution** and the text of the **RSNZ Canterbury Branch Trust Deed**.