

NEW ZEALAND ECOLOGICAL SOCIETY

Newsletter

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From the Editor

Kia ora koutou,

Welcome to the first NZES newsletter of 2022!

This newsletter features quite a few notices and opportunities to get more involved in the NZES and ecology in Aotearoa-NZ generally. Read on for

more information about joining the NZES mentoring scheme, applying to be the NZES Sustainability Officer and Social Media Advisor, becoming an Associate Editor of the NZ Journal of Ecology, and submitting an abstract and booking your calendars for several conferences.

I hope this year has started off well for you, and here's hoping that we'll be able to see each other at the NZES conference this year!

Ngā mihi,
Rowan

News from NZES Council

Kia ora koutou

The new NZES Council met (virtually) for the first time in early February. One of the main items was to sort out roles and responsibilities for the new Council. Nicola Day was appointed as Awards Convenor and Tim Curran has taken on the role of Submissions Co-ordinator. We are seeking volunteers for two other roles on Council – Sustainability Officer and Social Media Contact. Please get in touch if you're interested in either of these positions (see the ads in this issue of the newsletter). Jenn Sheppard has stepped down as Sustainability Officer. I'd like to thank Jenn for her hard work ensuring the society's activities are as sustainable as possible. We're also looking for a new Social Media Contact to replace Nicola Day. Thanks for your contribution Nicola.

For many years, the membership of clubs and societies in general has been declining. While our membership is still relatively strong (454 members as at the AGM in November 2021), NZES is not immune to this potential decline. With the NZ Journal of Ecology and the society Newsletter freely available online, some probably questioned why they were paying for membership. The conference is an obvious drawcard, but retaining members that sign up to get a conference discount remains a challenge. Some members joined (or remained) simply for the satisfaction of belonging to a society of like-minded ecologists, or to support the publication of the journal. However, Council recognises that's not sufficient for everyone, so we have been working hard to increase the benefit to members of belonging to the society. One of these initiatives is the Members Only section of the NZES website, which is now up and running. Huge thanks to Sarah Wyse and Olivia Burge for all their hard work to make this happen. You can now find all issues of the Newsletter in the Members Only section, along with information on the NZES mentoring scheme (another benefit of being a member!). More content will be added to this section in future, including AGM minutes and related

documents. The Council will also be exploring new benefits for members in the coming year – watch this space!

The Council will be continuing its work to improve diversity, equity and inclusion in NZ Ecology. It's important that we start with our own society. For example, in the 71 years of NZES's history, I am only the 8th woman to have served as President – the first female President was not elected until 1989. Maori have also been underrepresented in the society – in 2017 only 4% of respondents to a NZES membership survey identified as Maori. In 2018, Council prepared the NZES Diversity Statement and has been actively addressing these issues, in line with the society's strategy (2013–2018 and 2019–2023). Initiatives include encouraging nominations of underrepresented groups for society awards, asking organisers of our annual conference to consider diversity when inviting speakers and session chairs, appointing a Maori Representative to Council, and actively seeking women for leadership roles. We currently have two elected Councillors that are Maori, and are pursuing the appointment of a Maori Representative to replace Symon Palmer, who is now a Councillor. It's probably timely to see how much progress we've made on diversity and equity issues in the past four years, and to identify where we can improve going forward.

I have my fingers crossed that the society can meet in person for this year's conference, which will be held in Ōtepoti-Dunedin. Either way, it promises to be a great conference, with a fantastic local organising committee supported by professional conference organisers. I hope to see you there!

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

Debra Wotton

NZES Mentoring Scheme – Call for Mentors and Mentees

The NZ Ecological Society mentoring scheme 2022 is now open for participants to sign up. The aim of the scheme is to connect members throughout the country and give everyone an opportunity to share their experiences. We've been running the mentoring scheme for several years now, and the feedback has been very positive.

We're looking for mentors and mentees. Mentees can be students or early career ecologists (typically within 7 years of completing their highest qualification allowing for career gaps) and mentors can be anyone working in ecology. Mentees must be current members of NZES and mentors are encouraged to join or renew their membership.

Some people can be both a mentor and a mentee, for instance, a postdoc could mentor a student and seek mentoring from a more senior ecologist. Mentoring pairs will be matched based on experience of the mentor and needs of the mentee. Mentoring topics include balancing work and family, writing a paper and getting it published, developing a CV and any other topics pairs decide they would like to cover. In response to feedback, we will be providing some ideas for pairs to cover in their meetings.

The scheme is run online, and we generally suggest mentoring pairs meet every four to six weeks via Zoom (or Teams, Skype etc.) between the months of May and November.

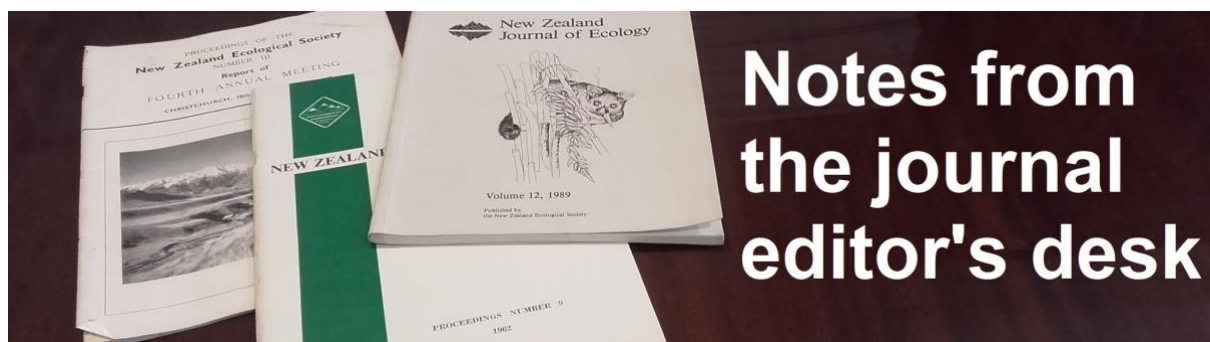
People who have taken part in the scheme previously are welcome to apply again this year. We will do our best to accommodate everyone.

If you are interested in being part of the scheme, you can find more information and the sign-up form on our website: [NZES Mentoring Scheme](#)

Applications close on the 22nd of April. Please fill in the form twice if you would like to be both a mentor and a mentee.

If you have any questions, please email the mentoring scheme coordinator, Kate McAlpine: kmcalpine@doc.govt.nz

Notes from the Journal Editor's Desk



Citations, citations, argh, citations...

Tom Etherington

This is a new column for the newsletter that aims to give members a better idea of what is going on with the New Zealand Journal of Ecology from the perspective of the Scientific Editor's role. The hope is that by

communicating some of the challenges and opportunities for the journal, members will be able to better support their journal and will have a journal that better supports them.

The topic of this column is citations. I personally hate citations. I'm sure I'm not alone here, as they are probably the most tedious part of the scientific writing process. I think the journal very sensibly does not require authors to adopt a specific citation format upon submission, as I think it is a complete waste of an author's time to reformat their citations and reference list to submit to a journal that ultimately rejects their paper.

However, papers that are accepted for publication must have properly formatted citations that meet our journal's style. If the style isn't correct things get a bit painful, as our poor Technical Editor must manually check and ask for corrections to the references. From the author's perspective this isn't ideal as this slows down the production process and can delay publication. From the journal's perspective this isn't ideal as it costs the society money to do this technical editing, and can ultimately mean that the publication of some papers results in a financial loss to the society.

Clearly both authors and the journal win if we can manage citation formatting better. To that end, with the help of some recent authors the journal now provides reference management software style format files for EndNote, Bookends, and as CSL (e.g. for Mendeley, Zotero, etc.) on the 'Author Instructions' page of the journal's website. The hope here is that for those using reference management software we should be able to get citations near perfect instantly. As these files have been generously provided by authors, they may not cover all reference types, so the hope is that authors can develop and correct them as needed, and provide or notify the journal of corrections or updates so that we can get a really good resource for our authors. Submission of style files for other reference management software would be welcomed too.

For authors who don't use any kind of reference management software, please, please, please consider starting to use something. It makes life so much easier for the journal, minimises the potential for errors in the published paper, and from personal experience can save you hours and hours of tedious formatting for every paper you publish.

Any compliments and complaints about the journal are always welcome at nzjecol.editor@gmail.com be it on this topic or any other.

Tom Etherington
Scientific Editor, New Zealand Journal of Ecology

Hot topics

There have been several Hot Topics published recently, including:

[Balancing ecological and social conflicts for the effective management of Himalayan tahr](#) by John Parkes

[Sound from recreational boats is a widespread pollutant in the Hauraki Gulf/ Tikapa Moana](#) by Louise Wilson

[RNAi: a novel tool for vertebrate pest management in Aotearoa New Zealand?](#) by Erica R Hendrikse, Andrew Veale, and Brian Hopkins

[Ecological damage from microplastic pollution – horror or hyperbole?](#) by Dr Kevin Simon, Nadia Dikareva, Amy Ockenden, and Anastasia Zaleta

Call for NZES Sustainability Officer and Social Media Advisor

Sustainability Officer:

We are seeking a new Sustainability Officer for the NZ Ecological Society Council. The Sustainability Officer will ensure that sustainability (environmental, economic and social) is championed within the society in the four key areas we have identified in our [Sustainability Plan](#):

1. Reduce the carbon footprint of our activities to net zero carbon, and encourage our members to do likewise;
2. Advocate for ecologically/environmentally sustainable practices;
3. Encourage the social engagement and wellbeing of our members; and
4. Be good stewards of our finances.

Specific duties include liaising with the Council and the annual NZES conference organisers to promote sustainable conference practices. The role may also occasionally extend to facilitating submissions on behalf of the society that relate to sustainability. The Sustainability Officer will also review and update the Sustainability Plan as a living document as required in consultation with the Council, and report on annual progress towards the NZES Strategy goals. This is a voluntary, ex officio role on the NZES Council. The Sustainability Officer is encouraged to attend as many council meetings as possible throughout the year (normally 6-10) and the annual conference, but this is not mandatory.

NZES members who are interested in this role or would like further information, please email the NZES President Debra Wotton (president@newzealandecology.org).

Social Media Advisor:

We are looking for someone to help run the Social Media Channels for the NZ Ecological Society! This would involve some or all of the following: posting about journal articles and Hot Topics as they are available, promoting and highlighting others' posts that are relevant to the society's goals, engaging with other NZ ecologists. We currently have a twitter page (<https://twitter.com/nzecology>) and a Facebook page (<https://www.facebook.com/nzecology/>). If you're enthusiastic about ecology in Aotearoa New Zealand, please consider contributing to the society in this way.

We envision that this role will be 1-5 hours per week, on a voluntary basis. If you are interested in this role, please contact: social.media@newzealandecology.org

Associate Editors needed for the New Zealand Journal of Ecology

Running the New Zealand Journal of Ecology is a major activity of the society. However, to run efficiently and effectively the journal relies upon the voluntary effort of its team of Associate Editors. While I as Scientific Editor do an initial screen of submitted papers to ensure they are suitable for the journal, it is the Associate Editors who do the actual work of finding reviewers and making judgements about whether a paper should be published or not.

We have had some turnover in our Associate Editor team of recent, so I am putting out this open call to look for members who would be interested in taking on the role of an Associate Editor. I would expect that an Associate Editor might handle around 3 papers a year, but as this is a voluntary role, and due to the random nature of the timing and types of ecological papers submitted to the journal, becoming an Associate Editor does not oblige you to handle papers if the subject matter or timing does not suit.

As this is a society run journal, I am looking for people who are first and foremost willing to volunteer their time to provide a kind and supportive review process that maximises the quality of the work published while also giving our members a positive peer-review and career development experience. I am also keen to maintain a balanced editorial board, including having some earlier career editors. Therefore, no previous

editing experience is required and so anyone interested should not self-select out on that basis. Beyond that, while anyone is encouraged to express an interest, to complement the existing areas of ecological expertise of the board I am particularly looking for ecologists with expertise in: entomology, herpetology, fungal ecology, invasive mammals, mātauranga Māori, microbial ecology, molecular ecology, or statistics.

If anyone is interested in taking up a role as an Associate Editor, please get in touch with me via nzjecol.editor@gmail.com explaining a bit about your interest in the society and the journal, your previous experience with scientific publishing, and your areas of ecological interest.

The society can only run the journal with the support of its members, so your support would be very much welcome.

Tom Etherington
Scientific Editor, New Zealand Journal of Ecology

2021 NZES Award Recipients

Te Tohu Taiao – Award for Ecological Excellence

Doug Armstrong, Massey University

Ecology in Action Award

Araceli Samaniego Herrera, Manaaki Whenua - Landcare Research

Outstanding publication on New Zealand Ecology

Azharul Alam, Lincoln University
Zachary Carter, University of Auckland

Best Publication by a New Researcher

Jamie McAulay, Department of Conservation
[New Zealand Journal of Ecology, 45\(2\): 3443.](#)

Barlow Scholarship

Jake Ball, Massey University

2021 Conference Awards:

Student Presentation

1st Elizabeth de Jongh, University of Canterbury
2nd Maggie MacKinnon, Victoria University
3rd Grace Mitchell, University of Waikato

Student Poster

1st Brittany Graham, Lincoln University
2nd Juliane Gaviraghi Mussoi, University of Auckland

NZJ Zoology award for best Zoological talk

Tas Vamos, Victoria University of Wellington

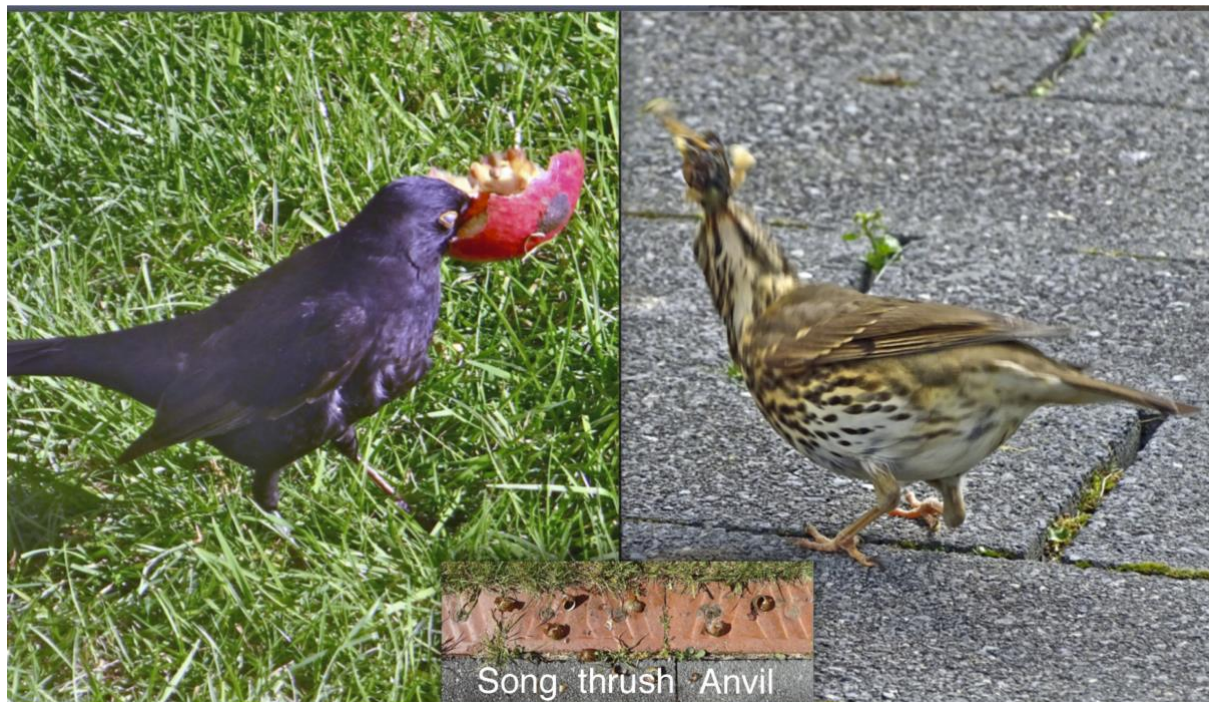
Highly Commended Best Presentation

Olivia Rooke-Devoy, University of Auckland
Tas Vamos, Victoria University of Wellington
Te Amohaere Ngata-Aerengamate, Victoria University of Wellington

Illustrate Ecology

A snail-opening niche

John Flux



Because congeneric hares (*Lepus*) have too similar niches to ever co-exist, how can song thrushes and blackbirds (*Turdus philomelos*, *T. merula*)? Their habits, habitat, and diet overlap completely. Desmond Morris (1954) describes the technique only thrushes evolved; a snail is gripped by its shell rim, and swiped sideways against a hard surface - the anvil: "It is a combination of the lowering and turning movements that produces sufficient force to crack the snail-shell." The photo shows the swing starts above its head (like a golfer). Blackbirds peck vertically, and

shake their heads to break off pieces. They can manage small snails (but have to steal large brown garden snails, *Cantareus aspersus*, after thrushes have opened them). Morris admits his garden had few blackbirds, which might have been “mentally deficient”; I can confirm our ones are too.

Morris, D. 1954. The snail-eating behaviour of thrushes and blackbirds. *British Birds* 47: 33-49.

NZES Conference Notice



**New Zealand Ecological Society 2022 Conference
28 November - 1 December 2022
University of Otago, Dunedin**

HE URU KAHIKA KI TE WAO - CONNECTIONS NEW ZEALAND

We invite our community to come together in Ōtepoti Dunedin, Aotearoa New Zealand for the **2022 New Zealand Ecological Society Conference running 28 November - 1 December.**

On Monday November 28th the Student Day and evening Conference Icebreaker will occur with the core conference programme running Tuesday to Thursday. Local field trips options will be offered on Friday 2 December. View the [programme page](#) for more details.

In the 2022 Conference theme we recognise the importance of hononga/connections: environmental connections, ecological connections, and human connections. Subthemes include:

- **Ecology in a Warming World** - recognising that global environmental changes will affect local conditions
- **Predator Free and Beyond** - progress towards eradicating key introduced predators from New Zealand by 2050 and steps needed to understand how interconnected natural systems will respond
- **Working Together** – conservation success is possible only through nurturing the connections between individuals, communities, tangata whenua, and organisations

For conference reminders and updates direct from the conference team be sure to [express your interest here](#).

Check out more information on the conference website here: <https://confer.eventsair.com/nzes2022/> #nzes2022

NZ Bird Atlas: eBird

Dan Burgin



INTECOL Call for Abstracts and Early Registration is Open

The upcoming INTECOL 2022 conference will be in Geneva from August 28. to September 2. 2022.

Check the list of [keynote speakers](#) and [great sessions](#) that we are planning.

The [call for abstract is open until March 31.](#) and the [registration just opened for early birds](#), again physically or online.

If you are interested, **join us on Twitter** to keep you updated: [@intecol2022](#)



HYBRID CONGRESS
(in-person and online)

INTECOL 2022

Geneva, August 28 - September 2



Frontiers in Ecology: Science & Society

KEYNOTE SPEAKERS

Peter Chesson - USA
Anusuya Chinsamy-Turan - South Africa
Sandra Díaz - Argentina
David Eldridge - Australia
Christian Körner - Switzerland
Pablo Marquet - Chili

E.J. Milner-Gulland - United Kingdom
Kirsten Parris - Australia
Steward T.A. Pickett - USA
Akiko Satake - Japan
Marten Scheffer - The Netherlands
Ole Seehausen - Switzerland

TOPICS

from basic ecology to application | global climate change | nature-based solutions
ecosystem and landscape restoration | biodiversity conservation | ecosystem services and management
urbanization | agroecology and sustainable agriculture | molecular ecology and evolution
ecological research in protected areas & more to follow - stay tuned and visit congress website

PLENARY SESSIONS, INVITED SESSIONS, POSTERS, WORKSHOPS, EXCURSIONS & MORE

www.intecol2022.org



Ecotones – New ecological research

Bruce Burns, University of Auckland

A selection of recently published research on or relevant to New Zealand ecology (except that published in the New Zealand Journal of Ecology). The list of other publications on New Zealand ecology can be found towards the end of the newsletter.

1. 'Conservation' is culturally defined: the case of kiore.

What is 'conservation'? A definition I pulled off the internet was this: "Conservation is the act of protecting Earth's natural resources for current and future generations." This seems straightforward but does beg the question, whose current and future generations? Often, effecting conservation means undertaking certain actions that will clearly benefit all cultural groups in society, but sometimes which actions to take are disputed. Different cultural groups can have different definitions of natural resources. A fascinating example of such a divergence of perspectives is the case of kiore (*Rattus exulans*) in Aotearoa New Zealand. Kiore were introduced by Māori at the time of Māori arrival and after establishment, harvested for food and pelts throughout the country. Kiore were displaced from most of mainland New Zealand by the later arrival of other rats, and now exist mainly on offshore islands. With the drive to use these islands as refugia for threatened native species, kiore are also being actively removed from these, their last strongholds. Wehi et al (2021) describe how the desire by a northern iwi, Ngātiwai, to conserve a population of kiore and therefore maintain their relationship with this species, has resulted in two small, partially connected islands of the Marotere Islands (off the coast of Northland) now being managed for kiore. The paper also assessed the population health of kiore on these islands. They found a satisfactory level of population health but noted that the population faced the same existential risks of any small population. Other populations of kiore may also need protection if the cultural aspirations of Ngātiwai and other iwi are to be met. The case of kiore exemplifies the fundamental need for wider representation of indigenous values in conservation management, and the need to regularly challenge assumptions on what conservation is and who it serves.

Wehi PM, Wilson DJ, Stone C, Ricardo H, Jones C, Jakob-Hoff R, Lyver PO 2021. Managing for cultural harvest of a valued introduced species, the Pacific rat (*Rattus exulans*) in Aotearoa New Zealand. Pacific Conservation Biology 27 (4): 432-441.



Kiore (*Rattus exulans*) in New Zealand Image source: P. J. de Lange

2. Community structure in a guild of invasive mammalian predators

A tenet of classic ecological theory is that competitive interactions within a community leads to niche partitioning. For predator species, this suggests that predators may achieve coexistence by specializing their activities to particular spaces, times, or prey items, i.e., avoiding competition. In New Zealand, a guild of invasive mammalian predators occupies many of our ecosystems with strong controlling effects. Garvey et al. (2022) have recently addressed the issue of whether these invasive predators partition niche space as would be predicted by ecological theory. They deployed 80 camera traps over two Hawke's Bay farms and over the course of 4,405 camera trap days followed interactions among cats, ferrets, and stoats, and also their main prey items rabbits, rodents, and birds. The activity of these predators showed strong partitioning with ferrets targeting rabbits as prey, and cats targeting rodents, both nocturnally. Stoats were mesopredators and adjusted their activity and prey selection to avoid the other two dominant predators; they hunted diurnally with native birds their most likely prey. Removal of ferrets and cats at one study site led to mesopredator release of stoats who

expanded spatially, temporally and in prey selection. Understanding these predator interactions and relationships is important for those planning control or eradication of any of the invasive predator or prey species. The lesson here is that removal of any one species will almost certainly have effects on the behaviours of those left behind which could lead to perverse outcomes. As well, with niche partitioning among these predators, there is no time or space free of some form of predation risk, meaning prey species need to be permanently vigilant.

Garvey PM, Glen AS, Clout MN, Nichols M, Pech RP 2022. Niche partitioning in a guild of invasive mammalian predators. *Ecological Applications* in press.



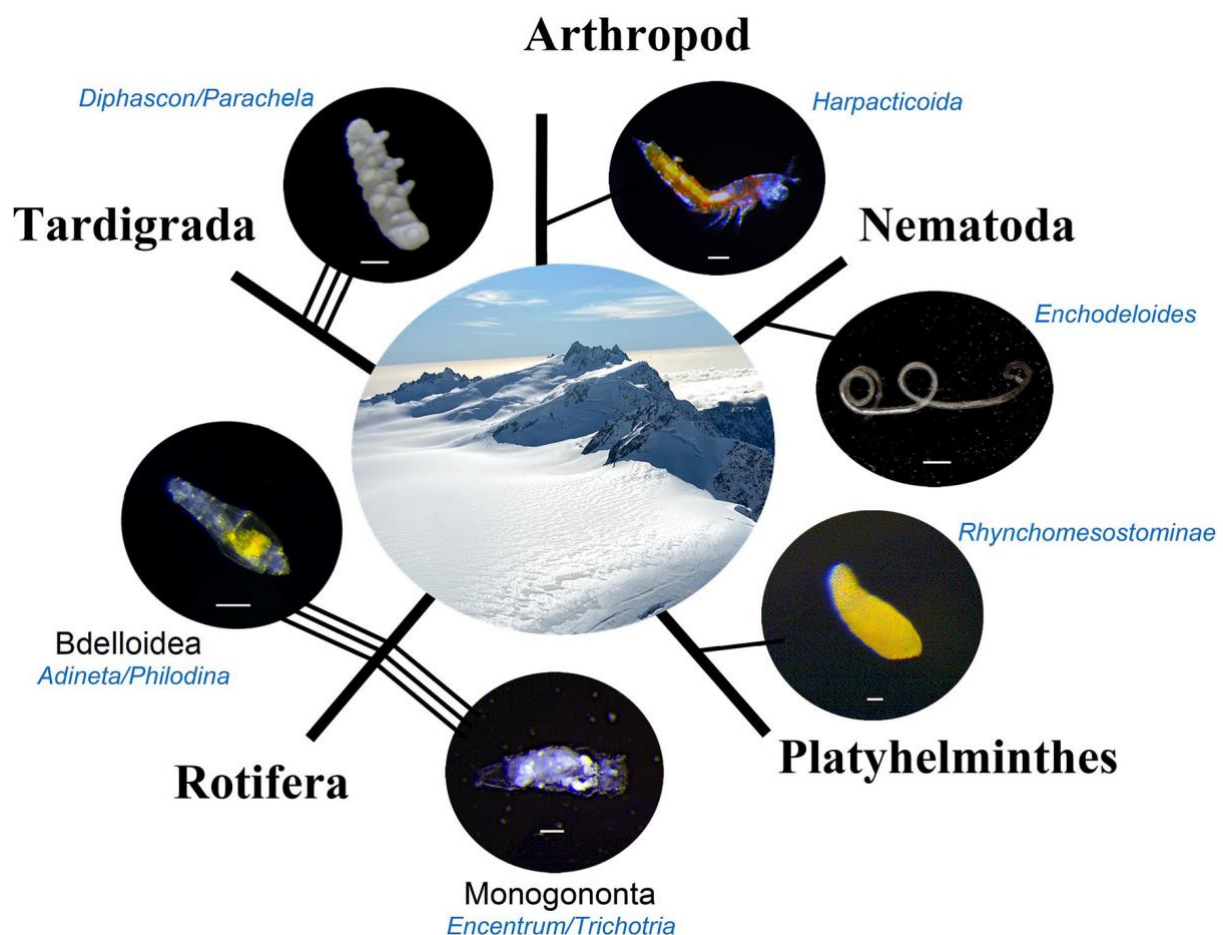
Camera trap images captured during the predator niche study Image source: Patrick Garvey

3. Exploiting an impossible niche: life in glacial ice

The ability of life to utilize extreme environments is awe-inspiring. One such extreme environment is glacier ice. Although deep ice on glaciers is highly compressed and provides no opportunities for life, surface and upper layers of ice still contain a network of microchannels connected to the surface and it is within these that life has been found. The

permanently cold temperatures, high UV radiation, nutrient poor and hydrologically limited conditions of these stressful sites mean that life here is predominantly composed of single-celled microbes. Few glacially obligate multicellular organisms have ever been discovered; until now. Shain et al. (2021) recently looked in ice from the Whataroa, Fox, and Franz Josef Glaciers and revealed unexpected hot spots of biodiversity. They found >5000 individual animals in their samples from Arthropoda, Nematoda, Platyhelminthes, Rotifera, and Tardigrada. Four of these phyla have never before been reported from within glacier ice. At least 12 new species were part of their samples. Such biodiversity is unprecedented on other glaciers sampled in other parts of the world. Unfortunately, New Zealand's glaciers are in rapid retreat through climate change, consistent with global trends, so these newly identified species are already under threat.

Shain DH, Novis PM, Cridge AG, Zawierucha K, Geneva AJ, Dearden PK 2021. Five animal phyla in glacier ice reveal unprecedented biodiversity in New Zealand's Southern Alps. *Scientific Reports* 11 (1): art. no. 3898.

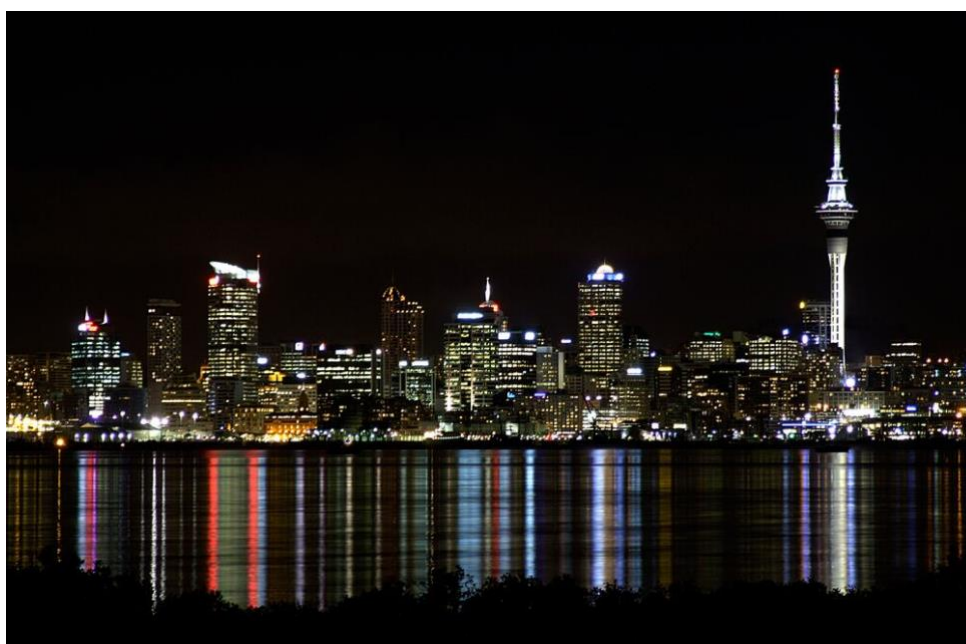


Animals in glacier ice collected from New Zealand's Southern Alps. Image source: Shain et al (2021) (CC by 4.0).

4. The big city lights of Auckland have ecological consequences

Whilst big city lights are marketed as tourist attractions, the amount of artificial light created by urban areas can also substantially change the environment for biodiversity. In particular, this artificial light dampens the expression of day/night and lunar cycles. Many taxa rely on these natural cycles as reliable environmental cues influencing processes such as navigation, foraging, reproduction, and communication, so light pollution can have significant ecological impacts on urban ecosystems. In a new paper, McNaughton et al. (2022) report on the amount and spatial distribution of sky glow levels across Auckland, and whether it impacts the expression of lunar cycles of light. They found that Auckland had sky glow levels consistent with other urban areas overseas, with the highest areas of light pollution occurring around the city centre, commercial and industrial centres, and areas of high housing density and streetlights. These levels of sky glow were enough to partially mask the lunar cycle, and the majority (>95% by area) of adjacent natural areas to Auckland experienced night skies brighter than natural levels. This study provides important evidence that urban biodiversity in Auckland is likely influenced by artificial light at night. Also, it provides a foundation for future studies to ask which taxa or ecosystems are impacted and how. Regardless, it suggests that managing urban lightscales in Auckland and elsewhere needs dedicated attention and action.

McNaughton EJ, Gaston KJ, Beggs JR, Jones DN, Stanley MC 2022. Areas of ecological importance are exposed to risk from urban sky glow: Auckland, Aotearoa-New Zealand as a case study. *Urban Ecosystems* 25 (1): 273-284.



Auckland city lights at night Image source: CC-BY-SA Stevenrockz

5. Understanding a taonga fragrance by blending Mātauranga and western science knowledge.

Increasingly, the blending of Mātauranga Māori with western scientific knowledge is leading to advances in ecological understanding and sustainable development of Aotearoa. Dobson-Waitere et al. (2022) provide an excellent example of the potential of such collaborations in reviewing the traditions, and historic and modern knowledge base behind taramea, a taonga perfume gathered from *Aciphylla* species (and incidentally now commercially available at <https://meafragrance.co.nz/>). *Aciphylla* spp. are generally alpine megaherbs that occur in the South Island high country and high-altitude areas of the southern North Island. The highly prized kakara (fragrance) comes from resin/oil collected from the leaves after heating over a fire. Traditionally the resin was mixed with bird fat to make fragrant satchets that were hung around the neck. The taramea oil was highly valued and used widely as a trading item. Several South Island location names, e.g., Karamea, relate to some aspect of taramea collection in that area. Ngāi Tahu recognized two main groups of *Aciphylla* spp. based on function (large species were used for fragrance, while the tap root of smaller species was eaten), however, they may have characterized them further and that knowledge is lost. Modern taxonomists now recognize 40 New Zealand species in this genus. This collection of vital knowledge is part of an ongoing research project which will determine the phytochemical variation in taramea essential oils among *Aciphylla* species and ensure harvesting practices of wild populations are sustainable (Dobson-Waitare et al. 2022).

Dobson-Waitere A, MacIntosh R, Ellison MF, Smallfield BM, van Klink JW 2022. Taramea, a treasured Māori perfume of Ngāi Tahu from *Aciphylla* species of Aotearoa New Zealand: a review of Mātauranga Māori and scientific research. *Journal of the Royal Society of New Zealand* 52 (1): 1-17.



Taramaea (*Aciphylla aurea*) in the Kakanui Mountains. Image source: John Barkla (CC by 4.0)

Draft 2021 AGM Minutes

Below are the draft minutes from our 2021 AGM, to be approved at the 2022 AGM. Please send feedback or corrections to our secretary Kate McAlpine: kmcalpine@doc.govt.nz

68th Annual General Meeting 30 November 2021, 2.30 pm Via Zoom

Present: Tim Curran, Kate McAlpine, Sarah Wyse, James Russell, Symon Palmer, Simon Moore, Nicola Day, Olivia Burge, George Perry, Chris Bycroft, Olivier Ball, Dave Kelly, James Russell, Carol West, Clayson Howell, Fleur Maseyk, Susan Timmins, Shona Myers, Margaret Stanley, Tom Etherington, Bruce Bulloch, Stephen Hartley, Carolyn King, James Lambie, John Innes, Rebecca Teele, Sandra Anderson, Florence Kelly, Janet Wilmshurst, CJ Ralph, Azharul Alam, Debra Wotton, Mel Galbraith, Rosemary Barraclough, Florence Kelly, Angela Brandt, Lisa Denmead, Jamie Wood, Francis Burdon, Cate Macinnis-Ng, Robyn Simcock, Dai Morgan, Kate Heaphy, Olivia Rooke-Devoy, Elise Arnst, Jo Carpenter, Bruce Burns, Sahar Firoozkoobi, Ellen Cieraad, Craig Morley, James McCarthy, Yanbin Deng, Finn Lee, Ara, James Brock, Jon Sullivan.

Apologies: Rowan Sprague, Karen Pratt

Agenda

1. Welcome and apologies - Tim Curran.
Reminder that this year is the 70th anniversary of NZES, congratulations!
2. Approval of 2020 AGM minutes - Tim Curran.
Moved by James Russell, seconded by Nicola Day.
3. President's report - Tim Curran.

Kia ora koutou. In many ways 2021 has felt like a rerun of 2020. We have had further covid outbreaks, more lockdowns (especially in Auckland), field work has been affected, many classes have returned to being delivered online, and we have again been unable to have an in-person conference.

However, there has also been great hope. For instance, Aotearoa has rolled out a mass-vaccination programme (though still with some clear inequities, which must be fixed), showing our willingness to listen to scientists and work together to fix this problem.

For the NZES we have been able to hold a conference this year, albeit an online one, due to ongoing cases on the North Island. It is a shame that we couldn't meet in person, but hasn't it been good to again give and attend talks on the best ecological projects happening around the country! For this we owe a huge vote of thanks to Olly Ball and Dai Morgan, the co-chairs of our local organising committee, and Kerry South and her team at Conference and Events. They have effectively planned three conferences: a live event mid-year 2020, the postponed live event scheduled for now, and finally the online conference that we are all enjoying currently. They have been doing this for two years, on top of all the other turmoil of the times and their regular jobs. To Olly, Dai, Kerry and your teams: thank you!

It has been a busy year for the NZES Council. We have added our first Māori representative to Council, with Symon Palmer joining us this year. Nau mai, haere mai, Symon. We are currently looking to recruit a second Māori representative, in line with best practice. Bridgette Farnworth and Anna Probert, our Hot Topics editors, have made great progress with this series, commissioning and editing several new articles. Bridgette has recently stepped down, and we thank her for building momentum for the Hot Topics, and wish her all the best. James Russell has again overseen the NZES Awards and has made some important changes to these processes, helping to streamline them. Our Equity and Diversity Subcommittee began work this year, chaired by Kiri Wallace, with Nicola Day and me also serving on it. Sarah Wyse, our webmaster, and Olivia Burge, our Memberships Officer, have worked hard to make a specific Member's Only part of the website, which is soon due to be unveiled. Nicola Day has continued to maintain our social media profile, especially on Twitter. Jenn Sheppard is working hard to implement our Sustainability Plan, and particularly link it into our face-to-face conferences. Our Newsletter Editor, Rowan Sprague, has been turning out excellent and interesting newsletters, and has been very patient with my tardiness in providing News From Council. Kate McAlpine continues to accurately record and organise our meetings, but has also taken on the NZES Mentoring Scheme, which is running well again this year. As always, Chris Bycroft has been working hard to keep our finances in order, and through some canny investments has ensured the society is in a strong financial position, ably guided by Carol West and Dave Kelly, our two Kauri Trustees.

So what else have we achieved? Well this is where Simon Moore's organisational nous, leadership and hard work come in. He has continued to oversee the refinement of NZES Strategy Report Card, in which we document our progress against the objectives contained

in our Strategic Plan. I have also really appreciated Simon's advice, support, wise counsel and kindness over the last couple of years. I now wish to table the NZES Strategy Report Card, which was sent out via email earlier in the week, and take you through some of our key achievements, many of which I've already reported above. First, we have used a traffic light colour coding to quickly summarize progress. Green represents tasks that have been achieved, or where there has been excellent progress on ongoing tasks. Orange are partly achieved tasks / moderate progress; while red indicates a task has not been achieved / poor progress. The report card shows us what we have achieved. Some highlights include: collected additional information on member demographics (through a survey of members and non-members, and additional information on the membership forms), and reviewing the status and targets for our financial investments. This also shows us some key priorities to be worked on next year, including consultation on incorporation of Te Reo Māori into the NZES name. I will happily take any questions about the Report Card at the end of this speech.

Several members of Council are stepping down. First, I wanted to give a huge vote of thanks to Kiri Wallace. Kiri served two years as Secretary and these last two years as Vice President. I have immensely appreciated her wise counsel, hard work, amazing organisational skills, leadership and positivity. She has been hugely supportive during these very difficult last two years, jumping in to share the workload when things got overwhelming and taking charge of several projects. Kiri has recently stepped down from Council as she embarks on her next great adventure; being a mum for the first time! Kiri's first child is due any day now and we wish her all the very best nestling success. Thanks too, Kiri, for all your help as we rejigged Council succession plans. Your dedication to NZES is greatly valued. James Russell has served the last two years as Councillor. He has done some great work during that time as Awards Co-ordinator, but I know that many on Council appreciate James for his willingness to make sure we consider a range of perspectives in our decision-making. James has just doubled his fitness (evolutionarily speaking) and he is stepping down from Council to spend more time with his young family.

We are coming to the end of an era at the NZJE. As mentioned in the newsletter, George Perry is stepping down after six years as editor. On behalf of the Society, I would like to thank George for the outstanding job he has done at the helm of our main publication. During his time as editor, George investigated and oversaw the shift to the Scholastica editorial management software, which has streamlined handling of manuscripts. After a period of long reflection and consultation, George also managed the shift of the NZJE to online only. Finally, George led a group that assessed the cost-benefit of remaining independent and open-access, or shifting the journal to a large publishing company. The decision was made to stay as we are, and we are now the only NZ science journal in this position, which has turned out to be quite a good one. When he steps down, George will have served 10 years on the Council. Thank you, George, for the stellar service that you have given to the journal and to the Society.

Of course, George is not leaving us just yet, as he has promised to stay on and mentor his successor. Which brings me to our exciting announcement that Dr Tom Etherington, of Manaki Whenua – Landcare Research, is the incoming Editor of the NZJE. Tom has been an Associate Editor of the journal for the last five years, and has previously worked at the Royal Botanic Gardens, Kew (where he was a Senior Research Associate at the University of Oxford), and AUT. Tom is an interdisciplinary ecologist, spanning a range of taxonomic groups and disciplines. Tom impressed Council with his vision for the journal – he plans to explore further options to make the journal truly open access, and to examine ways to make the journal more cost efficient. Council looks forward to seeing Tom's progress towards these goals and wishes him and the journal every success.

Finally, I wanted to thank the whole Council for all their hard work, kindness, and great humour over these last two very difficult years. It has been great fun and a privilege to work

with such a dedicated and talented group of people. I wish the new Council all the very best and know that the Society is in great hands.

Tēnā koutou, tēnā koutou, tēnā tātou katoa. Tim Curran

Discussion around whether a separate mentoring scheme for under-represented minorities is still planned.

Discussion around the potential to ask the Royal Society for help with 'red zone' items on the 5 Year Strategy. Cate offered to explore and facilitate as Constituent Organisation rep.

4. Election of office bearers - Tim Curran
 - a. Debra Wotton - President. Moved by George Perry, seconded by Olivia Burge. Elected.
 - b. Simon Moore – VP. Moved by Chris Bycroft, seconded by Carol West. Elected.
 - c. Chris Bycroft – Treasurer. Moved by Simon Moore, seconded by Sarah Wyse. Re-elected.
 - d. Kate McAlpine – Secretary. Moved by Susan Timmins, seconded by Simon Moore. Re-elected.
 - e. Nicola Day – councillor. Moved by Susan Timmins, seconded by Stephen Hartley. Re-elected.
 - f. Symon Palmer – councillor. Moved by Sarah Wyse, seconded by Nicola Day.
 - g. Sarah Wyse – councillor. Moved by Olivia Burge, seconded by Dave Kelly. Re-elected.
 - h. Sara Moylan – councillor. Moved by Symon Palmer, seconded by James Lambie. Elected.

Simon Moore thanked Tim on behalf of the council for all his time and hard work as President during difficult times.

5. Treasurer's report - Chris Bycroft (appended).

Dave Kelly expressed thanks to Chris for his work.

The four motions below were all approved in bulk.

- a. Chris Bycroft moved that the Treasurer's report for the 2021 AGM be accepted. Seconded by Dave Kelly.
- b. Chris Bycroft moved that the performance report (appended) for the New Zealand Ecological Society (Inc) for the year ended 31 December 2020 be accepted. Seconded by Dave Kelly.
- c. Chris Bycroft moved that NZES employ the same auditors (O'Fee Next Level Accounting) to be used again for our performance reporting next year. Seconded by Dave Kelly.
- d. Chris Bycroft moved that the following authorities be approved for authorisations on NZES bank accounts: Debra Wotton, Tim Curran, Chris Bycroft. Seconded by Dave Kelly.

6. Membership report - Olivia Burge

New Zealand Ecological Society AGM Membership report

Olivia Burge, memberships officer

2021-11-30

Membership officer role

I help our paid administrator Susan with the memberships database. This involves responding to member enquiries about the status of their memberships, enquiries about group memberships, etc. I also liaise with our Fuzion5 IT team about problems that crop up with the memberships database and back-end. For example, this year we discovered some folk weren't getting email reminders of expiring memberships (bit of a complicated bug). Aside from day-to-day things - I do other initiatives, like our members survey.

Membership initiatives

- Members only area - a work in progress! I have worked with Sarah (project lead) on this. We are ironing out a few issues. You should be able to log in! Usefully it will show:
 - Your membership ID (for future conference registrations)
 - When your membership is valid until
 - A link to renew your membership - no need to wait for the email/find the email
- Membership benefits - we are working on a key new membership benefit (still - slow progress)
- Member survey - please do this if you haven't! Reminder to follow the AGM with a link!

Membership numbers

Last year I discussed that we had a decline in member numbers (after a plateau), which was attributed to lower numbers of new members. Fewer new members *could* be linked to the lack of a conference - this is how we often get members signing up for the first time. This year total numbers have stabilised - but in contrast to last year we have quite a few new members (great!) but also fewer current members (Fig 1).

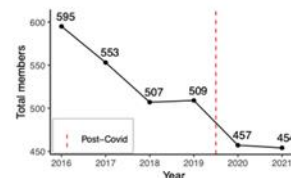


Figure 1: Number of total members over the past six years. Note y axis does not start at zero.

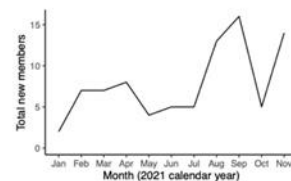


Figure 2: Number of new members signing up by month, for the 2021 year

7. Journal report - George Perry

New Zealand Journal of Ecology Scientific Editor's Report 2021, George Perry.

I am pleased to report on the activities of the New Zealand Journal of Ecology in 2021. The journal continues to receive many high-quality and diverse submissions (around 60 this year). In 2020 two standard issues were published, and there are two special issues in

progress (one on invasive species on the sub-Antarctic islands and one focusing on the ecology of NZ frogs, as a tribute to Dr. Phil Bishop). In 2020, we published two issues with 21 and 14 articles, respectively. Volume 45 (1) is in production and will be one of the largest we have published. The journal's 2020 impact factor slightly decreased to 1.50 (from 1.516); however, some important changes to how impact factors are computed partially explain some blips this year.

Anna Probert and Bridgette Farnworth have continued as the Hot topics Editors and Coordinators. There are nine hot topics online (five published this past year), and we welcome more! We have continued our relationship with the Science Media Centre, alerting journalists to the upcoming publication of potentially broad interest research. We continue to emphasise reproducible science and encourage authors, where appropriate, to make data and source-code available in public repositories. An editorial will shortly be published outlining our vision in this area.

The journal's success results from the tireless support I receive from the editorial board and the referees. Deb Wilson stepped down from the board this year, and I thank her for her sustained contribution to the journal. As technical editor, James Brock has done a sterling job in managing the editing process and dealing with the challenges posed by Covid-19. And, of course, many thanks to all of you who support the journal by acting as peer reviewers. Finally, I am stepping down from the role as scientific editor. I have made this decision not because I don't enjoy the position, but because periodic turnover and an injection of new ideas best serves the journal's development. I am extremely grateful to the editorial board, the reviewers, the authors and the Society for their continued support. – George Perry Scientific Editor, NZJE November 2021.

Cate and Tim thanked George for his leadership and work.

8. Webmaster report - Sarah Wyse

Sarah reported on the new Members-only section, explained how to get in and what will be there. Suggested members email Sarah if there is other content they would like included.

9. Newsletter report - Rowan Sprague

This was my first year as a Newsletter editor. We produced 4 newsletters this year – the January newsletter was compiled by Angela Simpson, the past newsletter editor, and I produced the other three newsletters.

Thank you to everyone who has contributed to the newsletter this year. We received many contributions, including Ecotones from Bruce Burns for every newsletter, Postgrad profiles from several of our postgrad members, and notices about upcoming events and surveys from other members. I'll look to start compiling the next newsletter in early February next year, and please continue to send me your excellent contributions. If there's anything else you'd particularly like to see featured or covered in the newsletters, please let me know.

10. Any other business - chaired by Tim Curran

Discussion around the potential shift to a co-leadership model to share the load. No plans to instigate under the current term of president, but looking to do this in future. Members can let

council know if they have any thoughts. It was also suggested that Council consider a 3 year term for president given that the current 2 year term is very short, particularly given the small pool of people we draw from.

Meeting closed: 3.59pm

Treasurer's Report appended below.

Treasurers report for the AGM of the New Zealand Ecological Society Inc on 30 November 2021 (Chris Bycroft)

Account balances on 20 November 2021 and comparison from previous AGM.

29 November 2021

NZES Cheque	36,693.97
NZES Savings	20,500.72
Barlow Fund	12,205.83
Kauri Fund	18,400.49
Westpac *	Closed
Barlow (Growth Fund -Simplicity): 83,254.65(\$65,000 invested)	
Kauri (Growth Fund -Simplicity): 90,304.16 (\$70,000 invested)	
Grand Total	261,359.80

*Special issue \$18,000, Kauri conference discount \$3,500, Barlow grant \$2,500, approximately \$237,359

Westpac closed in 2021

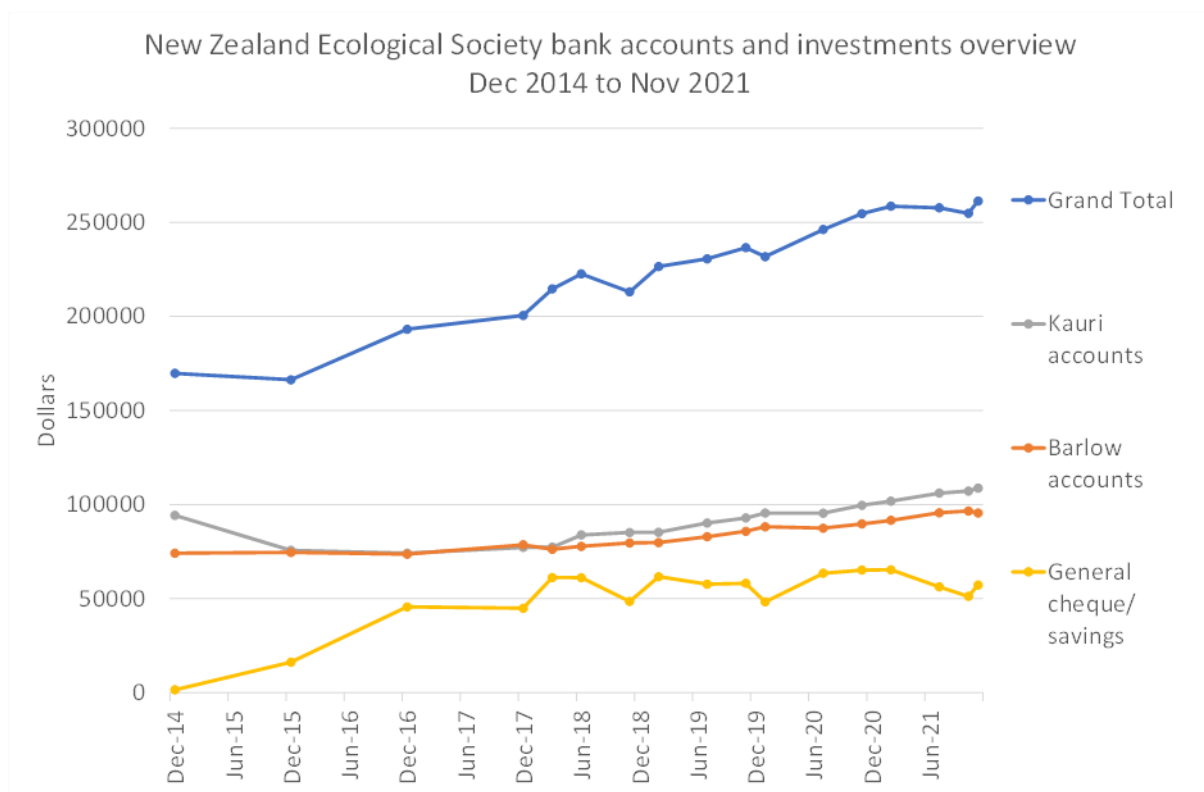
30 November 2020

NZES Cheque	42,150.84
NZES Savings	20,217.48
Barlow Fund	29,384.45
Kauri Fund	37,629.77
Westpac *	2,724.48
Barlow (Growth Fund -Simplicity): 60,279.82	
Kauri (Growth Fund -Simplicity): 61,964.23	
Grand Total	254,651.07*

*Special issue \$20,000 plus \$5000 stipend. \$229,351

	ANZ cheque, savings and Westpac cheque	Barlow Fund	Kauri Fund	Grand Total
Dec 2014	1,400	74,079	94,225	169,704
Dec 2015	16,161	74,502	75,615	166,278
Dec 2016	45,548	73,552	74,080	193,180
Dec 2017	44,813	78,539	77,151	200,503
Nov 2018	48,407.42	79,514.92	85,111.39	213,033.70
Feb 2019	61,587.13	79,743.42	85,220.72	226,551.27
Jul 2019	57,623.92	82,842.84	90,130.02	230,596.80
Nov 2019	58,062.03	85,708.46	92,793.26	236,563.75
Jul 2020	63,407.80	87,425.94	95,366.08	246,199.82

Nov 2020	65,092.80	89,664.27	99,594.00	254,351.07
Jul-2021	56,190.00	95,580.22	106,042.60	257,576.28
Oct-2021	51,170.09	96,508.22	107,130.60	254,808.90
Nov-2021	57,194.69	95,460.48	108,704.70	261,359.80



New Zealand Ecological Society (Inc.): Statement of Financial Performance for the Year ended 31 December 2020

PBE SFR-A (NFP) Public Benefit Entity Simple Format Reporting – Accrual (Not-For-Profit) on the basis it does not have public accountability and has total annual expenses of equal to or less than \$2,000,000

The complete audited performance report can be accessed on the New Zealand Charities Website. Search New Zealand Ecological Society. <https://www.charities.govt.nz>. Key aspects are summarised below.

How it was funded – what did it cost?

	2020	2019	2018	2017	2016	2015
Revenue						
Donations	855	7,220	13,741			

Fees subscriptions and other revenue from members	19,398	25,052	28,644	23,972	31,537	43,819
Revenue from providing goods and services	10,019	153,120	93,572	13,690	62,658	18,924*
Interest, dividends and other investment revenue	610	2,771	4,491	5,982	5726	5,072
Other revenue	4,724	7,198	3,931	3,430	3498	Not worked
Total Revenue	35,607	195,361	144,378	47,074	103,419	77,706
Expenses						
Volunteer and employee related costs	15,389	17,195	14,971	12,609	8,136	11,598
Costs related to providing goods or service	46,170	164,394	104,601	36,195	42,930	Not worked
Other expenses	3,446	3,436	7,025	8,069	7,397	Not worked
Total expenses including depreciation	65,004	185,025	126,597	56,874	58,463	Not worked
Surplus/(deficit for year)	(29,398)	10,337	17,781	(9,799)	44,956	(12,250)

‘What the Entity owns?’ and What the Entity owes’

Assets

	2020	2019	2018	2017	2016
<i>Current assets</i>					
Bank accounts and cash	131,577	123,861	124,186	81,962	58,686
Debtors and prepayments	932	12,998	1,955	5,545	15,440
Other current assets		-	46,000	66,138	136,394
Total current assets	132,509	136,858	172,141	153,645	210,520
Non-current assets					
Property, Plant and Equipment	1,212	1,893	3,013	4,865	7,934
Investments	100,000	100,000	52,417	50,000	0
Total non-current assets	101,212	101,893	55,430	54,865	7,934
Total Assets	233,721	238,571	227,571	208,510	218,455

‘What the Entity owns?’ and What the Entity owes’

Liabilities

	2020	2019	2018	2017	2016
<i>Current Liabilities</i>					
Creditors and accrued expenses	11,714	9,020	8,176	6,896	6,800

Income in advance	21,673				
Employee costs payable				-	242
Total current liabilities	33,388	9,020	8,176	6,896	7042

Total Assets less Total Liabilities (Net Assets)	200,333	229,731	219,395	201,614	211,413
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Accumulated Funds

Accumulated surpluses or (deficits)	33,251	61,174	53,880	48,327	63,782
Reserves	167,082	168,557	165,515	153,286	147,631
Total Accumulated Funds	200,333	229,731	219,395	201,614	211,413

Cash flows from operating activities

	2020	2019	2018	2017
Donations, fundraising and other similar receipts	22,528	7,220	13,741	
Fees, subscriptions and other revenue from members	19,398	25,052	28,644	23,972
Receipts from providing goods and services	22,084	8,676	18,283	22,621
Interest, dividends and other investment receipts	610	2,992	7,455	6,416
Cash receipts from other operating activities	4,724	4,555	3,931	3,430
GST	3,715	(14)	1,839	1,337
Payments to suppliers and employees	(65,343)	(49,805)	(46,817)	(54,756)
Total Cash flows from Operating Activities	7,717	(1,326)	27,086	3,020

Cash flows from Investing and Financing Activities

	2020	2019	2018	2017
Receipts from sale of investments		46,000	116,138	151,394
Payment to purchase investments		(45,000)	(101,000)	(131,138)
Total Cash flows from Investing and Financing Activities		1,000	15,138	20,256

Net Increase/(Decrease) in cash	7,717	(326)	42,224	23,276
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Cash Balances

Cash and cash equivalents at beginning of period	123,861	124,186	81,962	58,686
Cash and cash equivalents at end of period	131,577	123,861	124,186	81,962
Net change in cash for period	7,717	(326)	42,224	23,276

Other items: Analysis of Revenue

	2020	2019	2018
Donations and sponsorship	855	7,220	13,741

Membership	19,398	25,052	28,644
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Revenue from goods and services

Conference	1,916	144,369	78,191
Copyright Licencing Fee	-	246	3,814
Journal subscriptions	-	-	613
Page charges	8,103	8,505	10,954

Interest, dividends and other investment revenue

Interest received	195	611	751
Interest – Nigel Barlow	167	1,161	2028
Interest received - Kauri	248	998	1712
Total revenue for providing Goods and Services	610	2771	4,491

New Zealand Ecological Society (Inc.) Statement of Financial Performance for the Year ended 31 December 2020

	2020	2019	2019
Investment Impairment Reversal	-	2643	-
JSTOR	4724	4,555	3,931

Other items: Analysis of Expenses

Volunteer and employee related costs	2020	2019	2018	2017
Illustrations	713	1,177	735	650
Secretariat	1,756	1,551	1,080	1,479
Technical Editing	12,920	14,468	13,156	10,480
Total Volunteer and employee related costs	15,389	17,195	14,971	12,609

Costs related to providing Goods and services

Accounting	2,828	3,197	2,500	3,116
Awards	645	9,411	4,011	6,150
Bank charges	120	91	61	213
Conference expenses	25,744	136,451	74,405	

General Expenses	2,235	3,588	2,546	
Journal promotions	8,181	6,038	15,697	19,158
Subscriptions	2,291	1,913	2,642	1,959
Travel Local	1,190	1,098	976	1,943
Website	2,936	2,608	1,744	1,655
Total Costs related to providing goods or services	46,170	164,394	104,601	36,195

Other expenses

	2020	2019	2018	2017
Audit Fees	2,765	2,315	2,615	5,000
Depreciation	681	1,121	1,852	3,069
Investment impairment		-	2,558	10,480
Total Other Expenses	3,446	3,436	7,025	8,069

Publications in the current issue of NZ Journal of Ecology (volume 46, issue 2)

Research Article

[Understanding farmer behaviour: A psychological approach to encouraging pro-biodiversity actions on-farm](#) : 3468

Bruce Small, Fleur J. F. Maseyk

[Growth and survival of transplanted black beech \(*Fuscospora solandri*\) seedlings on Motuareronui \(Adele Island\)](#) : 3469

Simon Moore, Ron Moorhouse, Graeme Elliott, Helen Lindsay

[Toxin-laced rat carcass baits for stoat elimination](#) : 3453

Margaret Nichols, Jennifer Dent, Alexandra Edwards

[Testing the effectiveness of integrated pest control at protecting whio \(*Hymenolaimus malacorhynchus*\) from stoat \(*Mustela erminea*\) predation in beech forest \(*Nothofagaceae*\)](#) : 3470

Kate E Steffens, Jason P Malham, Rebecca S Davies, Graeme P Elliott

[At-sea foraging behaviour in Hutton's shearwater \(*Puffinus huttoni*\) as revealed by stable isotope analysis](#) : 3462

Della G. Bennet, Travis W. Horton, Sharyn J. Goldstien, Lindsay Rowe, James V. Briskie

[A risk to the forestry industry? Invasive pines as hosts of foliar fungi and potential pathogens](#) : 3471

Georgia S. Steel, Ian A. Dickie, Sarah J. Sapsford

[Sounding out the nest: Unobtrusive localisation of North Island brown kiwi \(*Apteryx mantelli*\) incubation burrows](#) : 3463

Susan Ellis, Stephen Marsland

[Do mice matter? Impacts of house mice alone on invertebrates, seedlings and fungi at Sanctuary Mountain Maungatautari](#) : 3472

Corinne Watts, John Innes, Deborah J. Wilson, Danny Thornburrow, Scott Bartlam, Neil Fitzgerald, Vanessa Cave, Mark Smale, Gary Barker, Mahajabeen Padamsee

[Burn probability mapping of Moutohorā \(Whale Island\), Bay of Plenty, Aotearoa New Zealand](#) : 3456

Brendon Christensen

[Attitudes and motivations of New Zealand conservation volunteers](#) : 3464

Aaron Heimann, Fabien Medvecky

[Thermal and physical characteristics of the nesting habitat of New Zealand's only endemic oviparous lizard](#) : 3465

Christopher K. Woolley, Kelly M. Hare, Vaughn Stenhouse, Nicola J. Nelson

[Future climates are predicted to alter the potential distributions of non-native conifer species in New Zealand](#) : 3473

Thomas R. Etherington, Duane A. Peltzer, Sarah V. Wyse

[Moths can transfer pollen between flowers under experimental conditions](#) : 3457

Max N. Buxton, Barbara J. Anderson, Janice M. Lord

[Acoustic monitoring and occupancy analysis: cost-effective tools in reintroduction programmes for rorua-great spotted kiwi](#) : 3466

Peter Jahn, James G. Ross, Darryl I. MacKenzie, Laura E. Molles

[Invasive rats consuming mountain flax nectar – resource competitors and possible pollinators?](#) : 3474

Marion L. Donald, Manpreet K. Dhami

[A partial skeleton provides evidence for the former occurrence of moa populations on Rakiura Stewart Island](#) : 3458

Alexander J. F. Verry, Matthew Schmidt, Nicolas J. Rawlence

[Genetic diversity and differentiation in the leaf litter weevil *Geochus politus* across an urban-rural gradient](#) : 3459

Talia Brav-Cubitt, Richard A. B. Leschen, Andrew J. Veale, Thomas R. Buckley

Editorial

[Implementing the Transparency and Openness Promotion Guidelines for data and code to support computational reproducibility within the New Zealand Journal of Ecology](#) : 3460

Thomas R. Etherington, James M. R. Brock, George L. W. Perry, Sarah V. Wyse

Obituary

[Ian Athol Edward Atkinson MSc \(NZ\) PhD \(Hawaii\) 1932–2019](#) : 3461

Mark C. Smale

Review Article

[Kiwi translocation review: are we releasing enough birds and to the right places?](#) : 3454

Peter Jahn, E Fernando Cagua, Laura E Molles, James G Ross, Jennifer M Germano

[The biogeochemistry and ecological impact of Westland petrels \(*Procellaria westlandica*\) on terrestrial ecosystems](#) : 3455

David Hawke

[Current knowledge and potential impacts of climate change on New Zealand's biological heritage](#) : 3467

Linda J. Keegan, Richard S. A. White, Cate Macinnis-Ng

Other recent publications on New Zealand ecology

Bruce Burns, University of Auckland

Apologies if I have missed your publication in my search. If I have, please send a citation to b.burns@auckland.ac.nz so I can include it in the next Ecotones.

Aitken J, Shadbolt M, Doherty J, Mark-Shadbolt M, Marzano M, Ataria J
2021. Empowering the Indigenous voice in a graphical
representation of Aotearoa's biocultural heritage (flora and fauna).
Pacific Conservation Biology 27 (4): 481-492.

- Allard H, Ayling AM, Shears NT 2022. Long-term changes in reef fish assemblages after 40 years of no-take marine reserve protection. *Biological Conservation* 265: art. no. 109405.
- Armstrong DP, Parlato EH, Egli B, Dimond WJ, Berggren Å, McCready M, Parker KA, Ewen JG 2021. Capturing the dynamics of small populations: A retrospective assessment using long-term data for an island reintroduction. *Journal of Animal Ecology* 90 (12): 2915-2927.
- Arranz V, Fewster RM, Lavery SD 2021. Geographic concordance of genetic barriers in New Zealand coastal marine species. *Aquatic Conservation: Marine and Freshwater Ecosystems* 31 (12): 3607-3625.
- Atalah J, Davidson IC, Thoene M, Georgiades E, Hutson KS 2022. Evaluating importation of aquatic ornamental species for biosecurity purposes. *Frontiers in Ecology and Evolution* 9: art. no. 804160.
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