



NEW ZEALAND
ECOLOGICAL
SOCIETY

2018 Conference

Victoria University of Wellington, New Zealand
25–29 November 2018



Programme



New Zealand Ecological Society Conference Wellington, 25-29th November 2018

**Absolutely Positively
Wellington City Council**

Me Heke Ki Pōneke



FIX & FOGG



Haere Mai - Welcome & Housekeeping

Te Whare Wānanga o te Ūpoko o te Ika a Māui Victoria University of Wellington, host of the 2018 conference.

Thank you for coming! Please make yourself comfortable and take the opportunity to meet fellow ecologists from other institutions. With an exciting line up of talks, posters and field trips, this promises to be an enriching conference. Here are a few house-keeping items to take note of:

- Victoria University of Wellington is a smoke free campus
- In an event of an earthquake: Act quickly – DROP to the ground, get under COVER and HOLD until the shaking stops.
- After the earthquake: Stay inside. If the building is unsafe, we will evacuate. In this situation, take your belongings. Beware of falling debris and make your way to a large open space, only if the route is clear. Use emergency door release buttons to exit. Do not use the lifts. Do not re-enter the buildings until the all clear is given.
- Fire alarm sounding: Leave the room and go to the assembly area (Cotton Plaza F15). Leave all belongings in the room.
- Fire in the room: Raise the alarm by breaking the glass on a manual call point and activating the switch.

Emergency numbers:

Campus Security – Ext. 8888 (0800 VICTORIA) or 04-463 9999
Or Emergency Services – 1-111

Organising committee

If you have any questions or concerns about the conference, please find one of organising committee who will be happy to help you.

Stephen Hartley– Stephen.Hartley@vuw.ac.nz
Clayson Howell - chowell@doc.govt.nz
Rod Hitchmough – rhitchmough@doc.govt.nz
K.C. Burns – Kevin.Burns@vuw.ac.nz
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Michael Jackson– Michael.Jackson@vuw.ac.nz
Olivia Vergara – Olivia.Vergara@vuw.ac.nz

Or please see the Conferences & Events team at the registration desk in the TTR foyer or get in touch by emailing nzes2018@confer.co.nz or phoning 021 024 77554

Orientation

- ★ Registration, posters and morning teas will take place in Te Toki a Rata (TTR) level 1 foyer (yellow star - F16).
- ★ All presentations will be held in Maclaurin Building lecture theatres: MCLT 103 & 101 (yellow star - grid square F17).
- ★ Sunday evening mixer will take place at Milk and Honey (red star - H20).
- ★ Lunch will be served in AM102/104 (blue star - G13).
- ★ Wednesday evening dinner is in the Hunter Lounge, Student Union (mauve star - J22)

Vehicle entry to Te Puni accommodation, and field trip transport via Gate 7 (E14).



Public campus wifi network : select **victoria**, then enter your email as login

Buses to and from Victoria University of Wellington and nearby attractions

Buses to and from Victoria University of Wellington arrive at grid square E18 (from town) and leave from D20 (both on Kelburn Parade).

Three bus services operate between town, Victoria University of Wellington and Waiapu Road (the entry road to Zealandia) – 18e, 21 and 22.

If heading for Otari-Wilton's Bush the 22 will take you as far as Pembroke Road, from whence it is a 10-15 minute walk. Alternatively catch the 14 from town.

For more information visit www.metlink.org.nz

Programme of events

Sunday 25th November – Optional Student Day & Welcome Mixer

08.30	Student Day Opening (LB118)
09.05	Mihi Whakatau - Tipene Merritt
09.20	Workshop 1: Incorporating Vision Mātauranga into your research
10.30	Morning Tea
11.15	Student Talks
11.45	Workshop 2: How Wikipedia works
12.15	Lunch (AM102/104)
13.15	Workshop 3: What to expect from the peer review process
13.45	Student Talks
15.00	Afternoon Tea
15.45	Panel: Effective Science Communication
17.00	End of Student Day (head to Welcome Mixer)

17.00 – 20.00	Welcome Mixer for all conference attendees (venue - Milk & Honey, Rankin Brown Bldg)
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Poster Presentations (Monday evening)

A new search tool to aid discovery of data from the National Vegetation Survey Databank	Elise Arnst
Habitat preferences of landhoppers (Crustacea: Talitridae): Perspectives from Te Pahi	Olivier Ball
Do orchids use visual tricks to lure pollinators?	Leah Barnfather*
Plant-mediated behavioural responses of the Argentine stem weevil (<i>Listronotus bonariensis</i> (Kuschel)) when exposed to a parasitoid (<i>Microctonus hyperodae</i> (Loan))	Miss Jacquelyn Bennett
Automated bioacoustic monitoring of morepork (<i>Ninox novaeseelandiae</i>) across three aerial 1080 operations	Roald Bomans*
A functional classification of woody vegetation in agroecosystems	Bradley Case
Pyranine as a Possum biomarker: Identifying limiting factors and quantifying pyranine expression in possums	Briar Cook
Is tree-fern based recruitment demographically significant for tree species in New Zealand's temperate rainforest?	Thomas Dawes*
Partitioning above and below ground interactions and their effects on juvenile <i>Dacrycarpus dacrydioides</i> (kahikatea) and <i>Podocarpus totara</i> (totara)	Garth Fabbro*
Mountain beech regeneration across an elevation gradient	Tarn Gillman*
Factors influencing beech seedling distribution and abundance across a beech-kanuka forest ecotone in the Boyle River area, Lewis Pass	Karina Hadden*
Efficient sampling of avian acoustic recordings: Intermittent subsamples improve estimates of single species prevalence and total species richness	Stephen Hartley
The Island Rule in plants: Do island endemics differ from their mainland relatives in a consistent pattern?	Annemieke Hendriks*
Wings over Wairio: Using UAV imagery to perform fine-scale mapping of wetland vegetation	Patrick Hipgrave*
Detection of temporal and spatial regime shifts in NZ systems – can we make better decisions?	Ellen Hume*
Sexual Deception: Hallmarks of a successful strategy	Alexandra Kai Fong*
Palatability-defence trade-off hypothesis: A New Zealand case study	Ganges Lim*
Mate choice and sexual communication in the New Zealand stick insect <i>Clitarchus hookeri</i>	Mari Nakano*
Exploring honey bees in New Zealand forest	Rachel Nepia*
Does phylogeny explain climatic niche patterns?	Miki Nomura*
Water use of regenerating forests on NZ farmland	Cate Ryan*
Exotic species dominate regenerating native forest post-fire	Luke Sutton*
Do epigeous beetles respond to mammal exclusion at ZEALANDIA Reserve?	Olivia Vergara

Download full details of abstracts at www.confer.nz/nzes2018/

Monday 26th November – Conference Day 1

08.30	Registrations Open (TTR foyer)	
09.00	Conference Opening (MCLT103) Mihi Whakatau – Mike Ross Kia kaha te reo Taiao	
09.30	NZES Plenary: Ecology in Action 2017 Award Recipient Richelle Kahui-McConnell	
10.30	Morning Tea	
11.00	SESSION 1 - "Think Big" (MCLT103, chair: Cate Macinnes-Ng)	
	Bradley Case Is the One Billion Trees programme fancy or folly? Results and implications from a GIS-based scoping analysis	
	Norman Mason Can Tier 1 tell us if conservation is making a difference? A new framework linking conservation planning and power analysis	
	Susan Wiser Using classification assignment rules to assess land use change impacts on national and regional forest biodiversity: a case study using the Mokihinui dam proposal	
	Jamie Wood Biogeography of New Zealand place names: using maps to trace the changing distribution of native species	
	Jon Sullivan Targeting crowd sourcing of observations and identifications to improve passive biosecurity surveillance in New Zealand	
	Stephanie Tomscha Wetlands for People and Place	
12.30	Lunch (AM102/104)	
13.30	SESSION 2 - "Rodents & Other Mammals" (MCLT103, chair: James Griffiths)	SESSION 3 - "Landscapes, Islands & Invertebrates" (MCLT101, chair: KC Burns)
	Helen Nathan 'GEN ONE' DETECTION: A scalable strategy for detecting invading <i>rats</i> in predator-free landscapes	Julia Schmack* What drives invasive social <i>wasp</i> abundances on offshore islands in New Zealand?
	Grace Yee* The fight for coexistence: Niche partitioning between Chatham Island kiore (<i>Rattus exulans</i>) and ship rats (<i>R. rattus</i>)	Fabio Mologni* Native vs. exotic species richness relationships on New Zealand offshore islands
	Nyree Fea Management of introduced mammals preferentially benefits large, endemic forest birds: A New Zealand meta-analysis	Monica Gruber Eradication is not the only option: Sustained control of introduced yellow crazy ants improves ecological and social outcomes in Atafu, Tokelau
	Bruce Burns Initial response of old-growth forest at Maungatautari to pest mammal exclusion	Eckehard Brockerhoff Using host plant removal and habitat fragmentation for eradication of invading insect herbivores
	Ian Westbrooke Using propensity scores for causal inference in ecology	David Hawke Using stable isotopes to show that an herbivorous beetle from alpine rock outcrops relies on ammonia-absorbing lichens
	Victor Anton* Habitat quality, interspecific interactions and anthropogenic activities influence the distribution of urban invasive mammals	Simon Connolly* Application of museum data for insect conservation
15.00	Afternoon Tea	
15.30	SESSION 4 - "Interactions" (MCLT103, chair: George Perry)	SESSION 5 - "Functions" (MCLT101, chair: Susan Wiser)
	Debra Wotton Habitat loss, weeds or seeds? Factors limiting regeneration of an endangered shrub	Matthias Dehling Functional roles and specialization, and species' contribution to functional diversity in plant-bird interactions on the local and continental scale, and across the Pacific
	Sandra Anderson The devil is in the demography: population persistence in the native gloxinia <i>Rhabdothamnus solandri</i>	Lizzy Farrington* Phylogeny of Inocatops (Coleoptera: Leiodidae) and Implications for Mycophagy
	Thomas Saunders* A new DNA sampling method to describe the diet of social wasps and evaluate their impact on native biodiversity	Filipe França Anthropogenic and climate-associated stressors combine to threaten the most biodiverse tropical forests
	Andrea Clavijo McCormick Smelly ferns: Investigating responses to herbivory in ancient plants	Anne Gaskett Orchid distributions and diversity: spatial and climatic patterns from herbarium records
	Brittany Florence-Bennett* Assessing the impact of avian predation on New Zealand lizard fauna	Frank Yonghong Li High multifunctionality of steppes under moderate grazing is associated with high plant and fungal, low bacterial, but not faunal diversity
	Cristina Llopis-Belenguer* Community structure of host-parasite associations: native and invasive networks	Chris Lusk Frost and leaf size gradients in forests
17.00	Break	
17.15	Poster Session (TTR foyer)	
19.00	End of Conference Day 1	

Tuesday 27th November – Conference Day 2

08.30	Registrations Open (TTR foyer)	
08.55	Housekeeping (MCLT103)	
09.00	Andrea Byrom Update on Science Challenge	
09.30	Cate Macinnis-Ng NZES President Address	
10.00	SESSION 6 - "Long-term research" (MCLT103, chair = Carol West)	
	Olivia Burge Reviving the Cockayne plots: 130 years of post-fire succession records in Arthurs Pass, NZ	
	Dave Kelly Mast seeding in <i>Aciphylla</i> species: patterns in a weird reproductive system	
10.30	Morning Tea	
11.00	SESSION 7 - "Climate" (MCLT103, chair: Clayson Howell)	SESSION 8 - "Behaviour" (MCLT101, chair: Rod Hitchmough)
	Andrew Tait Overview of NIWA climate data products for use in ecological modelling and assessments	Amy Brunton Martin* Why don't orchid pollinators go extinct? The persistence of the costly coevolutionary relationship between sexually deceptive orchids and their dupes
	Robert Beresford Using climate data to model establishment of myrtle rust in New Zealand	Briar Cook Rivers as geographic barriers to <i>possum</i> movement: A scalable strategy for defending predator free landscapes from possum reinvasion
	Justyna Giejsztowt* Climate change, plant invasion and their interactive effects on species' distributions	Rachael Shaw Memory performance influences male reproductive success in wild toutouwai (<i>Petroica longipes</i>)
	James Griffiths Using geospatial data for ecological modelling in R	Hannah Stilborn* Survival, predation and behaviour of the Mahoenui giant wētā (<i>Deinacrida mahoenui</i>)
	Cate Macinnis-Ng Remote sensing of ecosystem functions: what, why, how?	
12.15	Lunch (AM102/104) & NZES AGM (MCLT 103)	
14.00	SESSION 9 - "Monitoring 1" (MCLT103, chair Brad Case)	SESSION 10 - "Freshwater" (MCLT101, chair = James Brock)
	Yanbin Deng Managing biodiversity in the Waikato District through the Significant Natural Areas (SNA) programme	Abigail Kuranchie* Macroinvertebrate Diversity in Ponds in the Auckland Region
	Roger Uys Developing a national dune condition index	George Perry Requiem for Upokoro – New Zealand's only known historic freshwater fish extinction
	Renata Lara Muyllaert* Open data in South America: ATLANTIC BATS and the ATLANTIC collection	Jamie Wood A DNA-based wetland assessment and monitoring tool
		Thomas Devine Organ-Altering Microbes: The Role of the Microbiome in the Regeneration of <i>Xenopus laevis</i> tadpole tails
15.00	Afternoon Tea	
15.30	SESSION 11 - "Monitoring 2" (MCLT103, chair = Dave Kelly)	SESSION 12 - "Weeds" (MCLT101, chair = Jon Sullivan)
	Roald Bomans* Bioacoustic monitoring of native New Zealand avifauna before and after three aerial 1080 operations	Warwick Allen Community level indirect impacts of an invasive plant favour exotic over native species
	Ivan Campos* Monitoring biodiversity with acoustic indices: what time of day, seasons, and frequency to monitor?	Clayson Howell Wilding conifers other than <i>Pinus</i>
	Julius Juodakis* Automated detection of kiwi (<i>Apteryx</i> spp.) from continuous field acoustic recordings – New Zealand Tier 1 data analysis	Sarah Wyse Quantifying inter- and intraspecific variation in <i>seed</i> dispersal potential of introduced wind-dispersed conifers
	Virginia Listanti* AvianZ Birdsong Analysis Platform	Laureline Rossignaud* Invasion resistance of New Zealand native forests: role of indigenous tree diversity and surrounding land cover
	Ollie Gansell Using balanced acceptance sampling as a master sample for biodiversity monitoring in New Zealand	Carol West Restoration of Raoul Island, Kermadecs: The Weed Eradication Programme
		Lauren Waller Biotic interactions drive ecosystem responses to invaders in plant communities
17.00	End of Conference Day 2	
19.45 – 22.15	ZEALANDIA by Night Field Trip (meet at Zealandia 19:40, or TTR foyer 19:25)	

Wednesday 28th November – Conference Day 3

08.30	Registrations Open (TTR foyer)	
08.55	Housekeeping (MCLT 103)	
09.00	SESSION 13 - "Icons" (MCLT103, chair = Olivia Burge)	SESSION 14 - "Volatile" (MCLT101, chair = Sarah Wyse)
	Kristine Grayson Revisiting remnant populations: Surveys of <i>tuatara</i> on Northern and Cook Strait islands	Md Azharul Alam* Shoot flammability is decoupled from leaf flammability, but leaf traits control shoot flammability
	James McCarthy Using spatial distributions of Aotearoa's native Myrtaceae in the response to myrtle rust	Riki Taylor Interactions between invasion and fire promote novelty in New Zealand's fire-naïve landscape
	Ben Cranston* Mature kauri (<i>Agathis australis</i>) throughfall exclusion experiment to assess water and nutrient storage and use during drought	Tim Curran How good are green firebreaks at suppressing fire? A global review
	Tynan Burkhardt* Are kauri thirsty at night? Exploring nocturnal sap flow in <i>Agathis australis</i>	Evans Effah* Biogenic volatile organic compound emissions are affected by competition in natural environments
	Jorge Bresciano* The nectar-microbial loop in Mānuka plants: microbial composition and its effect on DHA production	Kyaw Min Tun* The role of plant volatiles in giant willow aphid (GWA) interactions with its host plants
	Susan Walker Spatial patterns and drivers of invasive <i>rodent</i> dynamics in New Zealand forests	Mike Dickison How Wikipedia works and why you should care Followed by Wikipedia edit-a-thon in TTR106, 10:30-15:00
10.30	Morning Tea	
11.00	SESSION 15 - "Restoration" (MCLT103, chair = Kiri Wallace)	SESSION 16 - "Theory" (MCLT101, chair = Bruce Burns)
	James Brock Skirting the issue: Epiphytes and chilly tree ferns	K.C.Burns Time to abandon the loss of dispersal ability hypothesis?
	Joshua Wium* Legacy effects of pastoral agriculture on ecological restoration	Esther Dale* Diversification of NZ woody lineages: are biome shifts important?
	Elizabeth E. Elliot* The capacity of restored urban forests to support <i>native birds</i> : Ecological or social restoration?	Michelle Marraffini* Indirect facilitation and invasion success in annual plant communities
	Febyana Suryaningrum* Envisioning the future forest: Can the One Billion Tree programme achieve multiple wins for carbon, biodiversity, and ecosystems services?	Matthew Biddick* The island syndrome in plants
	Susan Walker A new mechanistic framework to explain past geographic changes and predict future limits to local occupancy in New Zealand forest birds	Nicole Bezemer* Genetic structure across the natural range of <i>Eucalyptus caesia</i> , an endemic tree on granite outcrops
	Katherine de Silva* Seedling Regeneration Dynamics within Planted Urban Forests	Julie Deslippe Independently of plant-fungal guild, mycorrhizal networks are nested
12.30	Lunch (AM102/104)	
13.30	SESSION 17 - "Social" (MCLT103, chair = Debra Wotton)	SESSION 18 - "Urban" (MCLT101, chair = Tim Curran)
	Mark Herse* Protectionist versus indigenous peoples' approaches for management of a culturally-significant species	Yolanda van Heezik Green spaces for all ages
	Jennifer Pannell Using spatial analysis to infer socioeconomic drivers of New Zealand conservation	Paul Blaschke Wellington central city green spaces: is there enough and do they deliver optimum ecosystem services?
	Johanna Yletyinen Interplay between social networks and local social-ecological feedbacks drive conservation outcomes	Stephen Hartley Broad-scale effects of city, habitat and season on tracking rates of urban mammals
	Nadine Tupp Navigating complexity in conservation: a socioecological approach to framing, conflict and conservation in Virunga National Park	Wei Quan* Vegetation change and biodiversity restoration in post-earthquake Christchurch
	Helen Ough Dealy What's hope got to do with it? The role of learned hopefulness in community conservation sustainability	Kiri Joy Wallace Does restoring urban forest structure also restore ecological function? A look at decomposition and denitrification
	André Bellvé* The role of perching lilies (epiphytic <i>Astelia spp.</i>) as habitat-formers in northern New Zealand forests	Chris Woolley* Restoring the lizard faunae of New Zealand cities
15.00	Afternoon Tea	
15.30	SESSION 19 - "Loss" (MCLT103, chair = Stephen Hartley)	SESSION 20 - "Disease" (MCLT101, chair = Julie Deslippe)
	Jo Carpenter* Assessing the ecological consequences of extinction: <i>are</i> flightless birds important <i>seed</i> dispersers in New Zealand?	Marie Moinet* Using disease ecology conceptual frameworks to understand the eco-epidemiology of <i>Leptospira borgpetersenii</i> serovar Ballum in New Zealand
	George Perry Is the spatial signature of disperser loss detectable in the spatial structure of plant populations?	Renata Lara Muylaert* Seasonality and city structure affect the risk of leptospirosis in humans within South-Eastern Brazil
16.00	NZES Plenary: Te Tohu Taio 2017 (MCLT 103)	
	Award Recipient Graeme Elliott Large-scale predator control in New Zealand: past, present and future	
17.00	Conference Close & Student Prizes	
18.00-23:30	Conference Dinner at The Hunter Lounge, Student Union Bldg After dinner speaker: Alison Balance, followed by a ceilidh with "The Jimmies"	

Thursday 29th November – Optional Field Trip Day

	Morning Field Trips
09.00 – 12.00	Seal Coast Safari Tour
10.00 – 11.00	Otari-Wilton's Bush Native Botanic Garden & Bush Reserve
10.00 – 12.00	Zealandia by Day, Tour 1
	Afternoon Field Trip
13.00 – 16.00	Nature & People in Central Wellington City
14.00 – 16.00	Zealandia by Day, Tour 2
	Full Day Field Trips
08.30 – 16.30	Orongorongo Research (meet TTR foyer)
08.30 – 16.30	Wairarapa Moana - tour of wetland restoration & birdlife (meet TTR foyer)
09.30 – 15.30	Matiu Somes Island Tour (meet at water front)

Places to Eat

There are a wide range of eateries in Wellington, especially along Cuba Street and Courtenay Place. The following are just a few examples suggested by VUW postgraduates ☺
For a list and map of establishments highlighting local craft beers see www.craftbeercapital.com

CLOSE TO VICTORIA UNIVERSITY

Yellow Chilli (Indian in Kelburn Village) v

Kelburn Village Pub (Upmarket, yet traditional pub atmosphere)

Kelburn Café (Cozy little café to sneak away)

Cable Car Café (Amazing view over Wellington, adjacent the Botanical Gardens)

Aro Valley Café (superb coffee)

Arborist (probably the closest to Victoria in town, Willis Street) v

CUBA STREET AND BEYOND

Tolsi (Indian, great service) v

Cin Cin (Italian, amazing wood-fire pizzas and wine) v

The Flying Burrito Brothers (Mexican, margaritas, great atmosphere and service) v

Rogue & Vagabond (Bean bags, live music, great pizzas, and even better craft beer!)

Hotel Bristol (Traditional pub)

Murphies (Irish pub)

Capital Market (food court with Korean v, Indian, Vietnamese v, Sushi v, etc.)

Aroy (Thai street food) v

BEST PLACES FOR VEGAN, VEGETARIAN & GLUTEN-FREE

Aunty Menas (All vegan Chinese and Malaysian, inexpensive, and super friendly!)

Midnight Espresso (Café food, large selection)

Burger Liquor (American-style burgers, fries, and shakes)

Chow Tory (Mixture of Asian-style foods, decent prices, great atmosphere)

Sweet Release (All vegan sweet treats, pies, coffee, shakes, and more)

Fidel's Café (Large selection of cabinet and menu food)

Eleven Fifty Four (Italian, great prices, and amazing red wine to match)

v denotes other locations that also offer decent vegan, vegetarian, and gluten-free options

Otari Wilton's
Bush

