



Newsletter

PEOPLE CITIES NATURE

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New Year's Message

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Welcome to a new year!

2023 was a great year for People, Cities & Nature. We have accomplished a lot:

- We have released the Garden Star backyard biodiversity assessment tool to help New Zealanders understand the value of their backyard green spaces;
- Published a report on the state of native skinks in New Zealand cities;
- Collected soil samples from cities across New Zealand;
- And have rolled out a series of waananga in Hamilton city designed to connect people with traditional knowledge of maramataka, and the value of matauranga in urban restoration

Members of the People, Cities & Nature team travelled to Darwin where they facilitated an urban restoration symposium and

workshop.

Now, 2024 brings with it the halfway point in our current programme and we are excited about the results that our hard work is starting to bring in. This year we are looking forward to our mini-conference in Wellington in February where we will meet with representatives from city and regional councils, government, iwi, and environmental organisations to discuss our research and look for ways forward for bringing people and nature together in urban environments.

If you are writing your New Year resolutions, have a look outside and think about what you can do for native biodiversity in your neighbourhood. You might consider downloading our Garden Star tool to assess your backyard biodiversity and get some ideas on how to improve it.

HIGHLIGHTS

- SOAC Conference 2023
- New Graduate Students
- Mangaharakeke Paa Waananga



New Graduate Students



Robyn Du Preez (pictured left) is a graduate student working on a degree in architecture under the supervision of Dr Maibritt Pedersen Zari at Auckland University of Technology.

Robyn's project will explore how medium density architecture and associated ecological infrastructure can mitigate biodiversity loss and support its health in a fast-changing climate, while also enhancing the symbiotic relationship between human and non-human species.



Diana Methner (pictured left) is a PhD student under the supervision of Dr Nicola Nelson at Victoria University of Wellington.

Diana has experience in herpetological research, and is joining our team from Michigan, USA. Her research is examining techniques for enhancing translocation success of NZ endemic lizards

State of Australasian Cities 2023

The State of Australasian Cities conference is the flagship event of the Australasian Cities Research Network and provides a forum for urban researchers, policy makers, practitioners, academics and students to meet and share and discuss research related to Australasian cities. The 2023 conference was held in Wellington, New Zealand in December – the first time this conference has been held in New Zealand in its twenty-year history.

Bruce Clarkson was invited as a keynote speaker to share his decades of research experience on restoring nature in urban environments.

Claire freeman was part of the local organising committee and delivered a presentation on People, Cities & Nature's work on residential design for biodiversity. Claire was also awarded the Australasian Cities Research Network (ACRN) medal in recognition of sustained and outstanding service contribution to the ACRN community and to urban research scholarship and policy.

Hannah Rogers presented her PhD research on the role of tree ferns in urban forest restoration at the student's conference. Hannah is pictured below with other urban PhD students at the conference. Photo by Stephen Olsen.



Mangaharakeke Paa Waananga

In November People, Cities & Nature hosted the third in a series of waananga in Hamilton City. The waananga was held at Mangaharakeke Paa, an historic site on the Waikato River.

Restoration of the paa site commenced 10 years ago in a partnership between Fonterra and local iwi including Ngaati Wairere. The project used archaeological data and historical knowledge from Ngaati Wairere to identify plant species to restore to the site, and historical features, such as tranches and terraces, to be restored. It is a great local example of restoration of both ecology and culture in an urban environment.

At the waananga, over 30 educators, environmental professionals, and tangata whenua gathered to discuss the rich history of the location and learn about soil science and the traditional knowledge of maramataka.

Megan Balks led a hands-on workshop on soil science where participants used an auger to uncover the soil profile and discuss the history of the paa site. And Piripi Lambert taught workshop participants how to build a star compass for the mapping and interpretation of moon, stars, and winds.

One participant said of the day "I enjoyed the stories and the matauranga. Maori matauranga provides a much longer history of an area than pakeha written histories. These stories tell so much more about what was once here and what we're trying to restore."

UPCOMING EVENTS

26th IUFRO World Congress

The IUFRO World Congress is one of the largest global forest events, held every five years since 1893. The theme of the conference is toward a sustainable future within forestry, climate and society – aligned with the United Nations' 2030 Agenda for Sustainable Development.

Kiri Wallace was invited to present at the conference on her research regarding urban forest planting. She will send a research poster to be featured at the poster session, titled: Restoring future forests: Drivers of urban tree recruitment differ by species' successional status and juvenile growth stage.

People Cities Nature Mini Conference

In February we are hosting a mini conference event, welcoming end-users of our research from across New Zealand to hear about and discuss a way forward for urban restoration in New Zealand. Registrations have now closed for this event. Please contact peoplecitiesnature@gmail.com if you wish to have been unable to register and would like access to recordings of the event.

ACRN Medal winners: (right to left) Nicole Gurran and Claire Freeman. Photo by Stephen Olsen.



RECENT PUBLICATIONS FROM OUR RESEARCHERS

Birnbaum, C.; Dearnaley, J.; Egidi, E.; Frew, A.; Hopkins, A.; Powell, J.; Aguilar-Trigueros, C.; **Liddicoat, C.**; Albornoz, F.; Heuck, M.K.; Dadzie, F.A.; Florence, L.; Singh, P.; Mansfield, T.; Rajapaksha, K.; Stewart, J.; Rallo, P.; Peddle, S.D.; Chiarenza, G. 2024. Integrating soil microbial communities into fundamental ecology, conservation, and restoration: examples from Australia: Ecological Society of Australia (ESA) and Society of Conservation Biology Oceania (SCBO) joint Conference, Wollongong, Australia, 28 November-2 December 2022. *New Phytol* 241: 974-981.

Hewlett, D.; Gray, D.; Gunton, R.; Munro, T.; Agarwal, S.; **Breed, M.**; Skelly, C.; Weinstein, P.; Terradillos, A.; Lavrushkina, N. 2023. Significant Spaces: Exploring the Health and Wellbeing Impacts of Natural Environments. *Managing Protected Areas: People and Places*: 167-192.

Hoffbeck, C.; Middleton, D.M.R.L.; **Nelson, N.J.**; Taylor, M.W. 2023. <sc>16S rRNA</sc> gene-based meta-analysis of the reptile gut microbiota reveals environmental effects, host influences and a limited core microbiota. *Molecular Ecology* 32: 6044-6058.

Peddle, S.D.; Cando-Dumancela, C.; Krauss, S.L.; **Liddicoat, C.**; Sanders, A.; Breed, M.F. 2024. Agricultural land-use legacies affect soil bacterial communities following restoration in a global biodiversity hotspot. *Biological Conservation* 290: 110437.

Robinson, J.M.; Breed, A.C.; Camargo, A.; Redvers, N.; **Breed, M.F.** 2024. Biodiversity and human health: A scoping review and examples of underrepresented linkages. *Environmental Research* 246: 118115.

Romanelli, J.P.; Piana, M.R.; Klaus, V.H.; Brancalion, P.H.S.; Murcia, C.; Cardou, F.; **Wallace, K.J.**; Adams, C.; Martin, P.A.; Burton, P.J.; Diefenderfer, H.L.; Gornish, E.S.; Stanturf, J.; Beyene, M.; Santos, J.P.B.; Rodrigues, R.R.; Cadotte, M.W. 2024. Convergence and divergence in science and practice of urban and rural forest restoration. *Biol Rev Camb Philos Soc* 99: 295-312.

Shangguan, H.-Y.; Geisen, S.; Li, Z.-P.; Yao, H.-F.; Li, G.; **Breed, M.F.**; Scheu, S.; Sun, X. 2024. Urban greenspaces shape soil protist communities in a location-specific manner. *Environmental Research* 240: 117485.



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