



Newsletter

PEOPLE CITIES NATURE

June 2023

RESEARCH LEAD MESSAGE

Professor Stephen Hartley

Research Lead: Retain and Restore Urban Wildlife



Predator control and habitat enhancement are two key management techniques in the quest to Retain and Restore urban wildlife in Aotearoa New Zealand, and both are under investigation by People, Cities & Nature (PCaN) researchers.

For the past four years Predator-Free Wellington has been breaking new ground with the intensity of their urban predator control and PCaN researchers have been there to monitor the results. The latest monitoring in May 2023 was the twelfth survey in six years, led this time by PCaN Masters student Kathryn Grayston assisted by Fiona Balfour, Mare Leenders, Kat McGee and international intern Faustine Cabanne.

No rats have been detected on Miramar

peninsula by our monitoring since the eradication attempt began in the winter of 2019, mouse numbers appear slightly reduced while the number of tree wētā in wētā motels across the peninsula has doubled compared to the rest of Wellington.

These results suggest that wētā could be an excellent indicator of local biodiversity responses to rodent control. Unlike more mobile species, such as birds, population responses are more localised, and the high reproductive rates of insects allow for more rapid responses. For this reason, Wellington City Council will be encouraging community groups to monitor wētā as an indicator of biodiversity responses to predator control.

HIGHLIGHTS

- Gardentstar backyard biodiversity tool
- NUWAO Oceania Design Competition
- New recruits

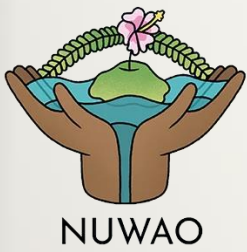
FIRST EQUAL / PROFESSIONAL CATEGORY

SAIBO
FISHING SONA

"Fishing Sona" is a biodegradable and recyclable system that recovers the traditional method of making fish traps from coconut fiber, and other vegetable materials, for designing a new production system for small shores.

People of Tarawa use ancient techniques for creating fabrics, carpets, ropes, baskets, mats of grasses, etc. This rich source of knowledge helps to define the elements of the project.

NUWAO Oceania Design Competition



NUWAO Oceania Design Competition

NUWAO (Nature-based Urban design for Wellbeing and Adaptation in Oceania) recently hosted a design competition inviting design professionals, students, youth, and general public to create urban design solutions, based on indigenous

knowledge to support climate change adaptation and individual and community wellbeing. Submissions included a range of designs from single site to whole town and city concepts. People, Cities & Nature was pleased to contribute to sponsorship of the competition and exhibitions.

Fourteen designs were awarded prizes and were featured in exhibitions at the Wellington School of Architecture and at

Thistle Hall in Wellington over April to June (pictured right). The exhibition is moving to Auckland Institute of Technology from July 31st to August 4th 2023.

To view the winning entries and learn more about nature-based design for urban environments visit www.nuwao.org.nz.



Picture credit: nuwao.org.nz

3MT Masters Competition

Poppy Romera, one of our MSc students, has won the 3MT masters competition at the University of Waikato. In this competition Poppy summarised her MSc research "Aboveground urban forest restoration in urban greenspaces: Can it promote human and wildlife health by influencing their microbiomes?" in under 3 minutes with one static slide. As the winner, Poppy will receive a \$500 cash prize.

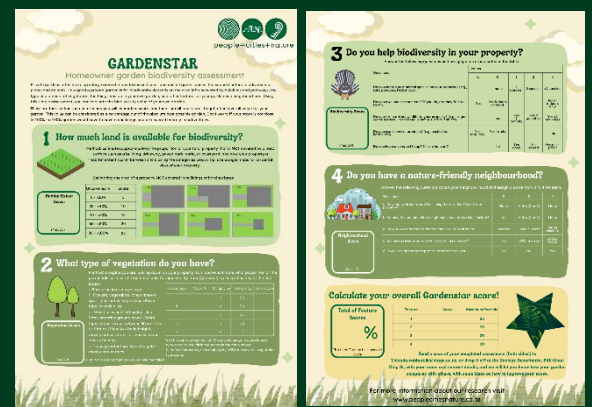


New Recruits

Nicole Fickling is a PhD student at Flinders University in Adelaide Australia. Nicole is working under the supervision of Dr Martin Breed.

Katie Jenkins is working toward a Master of Landscape Architecture at Victoria University of Wellington. Katie is being supervised by Maibritt Pedersen Zari.

Hannah Rogers is a PhD student at the University of Waikato. She is working on the role of tree ferns in urban restoration in New Plymouth and Hamilton. Hannah's research is being funded by the George Mason Charitable Trust and People, Cities and Nature.



GardenStar Backyard Biodiversity Tool

Private gardens make up a large proportion of urban greenspace in most cities. Because of this, small actions by householders can scale up to have a significant impact on urban biodiversity, ecological function and connectivity in cities.

Research by Professor Yolanda van Heezik and her team set out to devise a garden accreditation to incentivise householders to improve the native biodiversity in their gardens and inform them about different things they could do to enhance their gardens for native biodiversity. The accreditation tool they developed measures habitat extent, quality, connectivity & management practices to produce an overall rating. Trials on 98 gardens indicate that the rating tool performs well.

A simplified version of the tool is a two-page questionnaire that guides gardeners to identify land availability, vegetation type, efforts toward helping biodiversity (such as pest management and bird feeders) and neighbourhood activities for biodiversity. The questionnaire culminates in a GardenStar score.

Yolanda has recently teamed up with the Valley Project and the Amenities Society in Dunedin to promote the GardenStar tool and encourage more urban residents to boost their backyard biodiversity.

If you would like to assess the biodiversity value of your backyard and find out what you can do to improve it, download the assessment tool at the webpage below and send a scan of your completed assessment (both sides!) to Yolanda.vanheezik@otago.ac.nz.

www.peoplecitiesnature.co.nz/tools

IN THE NEWS

Fickling N, Abbott C, Brame J, Cando-Dumancela C, Liddicoat C, Robinson JM, Breed MF. **Light-dark cycles influence soil bacterial composition in situ**. Authorea. doi: 10.22541/au.168614476.62136224/v1

Brame J, Liddicoat C, Abbott C, Edwards RA, Robinson JM, Gauthier NE, Breed MF. **The biogeography of butyrate-producing bacteria**. bioRxiv. doi: 10.1101/2022.10.07.510278

Robinson J, Breed A, Camargo A, Redvers M, Breed MF. **Biodiversity and human health: a scoping review and case studies on underrepresented linkages**. Preprints. doi: 10.20944/preprints202210.0275.v1

Robinson J, Daniels C, Breed MF. 2022. **From microbes to forest bathing, here are 4 ways healing nature is vital to our recovery from COVID-19**. The Conversation. Sept 8.

UPCOMING EVENTS

26th -30th September – Society for Ecological Restoration international conference in Darwin, Australia. Find out more and register at <https://ser2023.org/register/registration/>.



Explore a holistic approach to restoring nature in urban environments:

- Designing cities for engagement with nature
- Restoring wildlife and managing urban pests
- Links between restoration and human health
- And co-developing restoration activities with indigenous peoples for restoration outcomes beyond biodiversity.

Then join a team of urban research experts to assess paths forward toward sustainable urban living in our urban restoration workshop.

REGISTER AT SER2023.ORG

A reminder that People, Cities & Nature will be hosting a symposium and workshop at the Society for Ecological Restoration world conference in Darwin, 26-30th of September 2023. The topic is 'Global research priorities for urban restoration'. We invite the participation of interested parties to explore urban restoration with our team of experts and help us assess paths forward toward sustainable urban living.

RECENT PUBLICATIONS

Robinson J, Breed MF. 2023. Aerobiome-health axis: a paradigm shift in bioaerosol thinking. Trends in Microbiology. doi: 10.1016/j.tim.2023.04.007

Zhang Y, Su J, Liao H, Breed MF, Yao H, Shanguan H, Li H, Sun X, Zhu YG. 2023. Urbanization increases antimicrobial resistance and human bacterial pathogens in an invasive land snail. Environmental Science & Technology. doi: 10.1021/acs.est.3c01233



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