

Aisling Lilian Rayne

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✿ Te Pūnaha Matatini Centre for Research Excellence

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Introduction

As an emerging social scientist and tangata Tiriti, my research aims to understand and enable transformative change in complex systems. Since my rural upbringing to post-PhD, I have been deeply curious about our diverse relationships with more-than-human nature. My PhD extended traditional conservation genomics into an interdisciplinary space through community partnerships, including the centring of mātauranga-ā-iwi-ā-hapū and Indigenous data sovereignty. Since then, I have been studying diversity, equity, and inclusion in the research system using mixed methods (e.g., questionnaires, interview, reflexive thematic analysis and social network analysis) through a lens of care ethics. Along with my co-leadership roles in New Zealand's Biological Heritage National Science Challenge and Te Pūnaha Matatini Whānau, I look forward to bringing these diverse experiences to bear in future collaborations at the people-environment interface.

Professional experience

2022–present	CENTRE FOR SUSTAINABILITY, UNIVERSITY OF OTAGO ✿ TE PŪNAHA MATATINI Research Fellow (0.8 FTE. End date: 31 July 2022) • The Kindness in Science Project
2022–present	NEW ZEALAND'S BIOLOGICAL HERITAGE NATIONAL SCIENCE CHALLENGE Co-lead • Ngā Pi Ka Rere (Early Career Pou) Independent Researcher (0.2 FTE) • Impact Pou ✿ Freshwater Strategic Investment Plan
2021	UNIVERSITY OF CANTERBURY Research Associate (Conservation Genomics) • School of Biological Sciences
2017–2020	Lab Demonstrator • School of Biological Sciences
2019	Teaching Assistant • School of Educational Studies and Leadership

Education

2021	PHD in Biological Sciences, University of Canterbury
2017	BSc(HONS, 1ST CLASS) in Biological Sciences, University of Canterbury
2016	BSc in Ecology, University of Canterbury

Services ✿ affiliations

2022–present	Secretary, Te Pūnaha Matatini Whānau, Te Pūnaha Matatini
2022–present	Advisor, Kā Ara Tīpuna (VMCF), Te Rūnanga o Ngāi Tahu
2021–present	Technical Advisor, Te Pātaka a Tahu (MABx), Te Rūnanga o Ngāi Tahu
2020–present	Member, Technical Advisory Group on Regenerative Farming Practices, MPI

2020–2021	Member, High Quality Genomes and Population Genomics , Genomics Aotearoa
2017–2020	Executive Member, Student Volunteer Army , University of Canterbury

Awards

2020	Bioheritage COVID-19 Extension Scholarship
2018	Roper Doctoral Scholarship for top-ranked domestic applicant in Science at UC
2017	UC Annual Biology Conference Best BSc/BSc(Hons) Presentation
2017	Todd Foundation Award for Excellence
2016	University of Canterbury Senior Scholarship
2016	LIC Patrick Shannon Scholarship
2016	Canterbury Branch New Zealand Federation of Graduate Women Trust Award
2015	UC Pilgrim Prize
2014	UC Emerging Leaders Development Program
2014	UC Undergraduate Entrance Scholarship
2013	Orion Selwyn District Centenary Educational Trust Scholarship
2013	Darfield High School Parent Teacher Student Association Prize for Dux

Research grants (contributing researcher)

2022	Investigator Seed Funding, Te Pūnaha Matatini (<i>\$58K awarded to TE Steeves</i>)
2021–2023	Vision Mātauranga Capability Fund (Connect), Ministry of Business, Innovation and Employment (<i>\$250K awarded to Te Rūnanga o Ngāi Tahu</i>)
2021–2023	Māori Agribusiness Extension (MABx) Phase I, Ministry for Primary Industries (<i>\$60K awarded to Te Rūnanga o Ngāi Tahu</i>)
2019–2020	Research Linkages Seeding Grant, College of Science, UC (<i>\$20K awarded to TE Steeves</i>)
2017	Data Deficient Research Grant, Department of Conservation (<i>\$3.8K awarded to TE Steeves</i>)

Publications & talks

PEER-REVIEWED ARTICLES

In Press	Forsdick N, Adams CI, Alexander A, Clark AC, Collier-Robinson L, Cubrinovska I, Croll Dowgray M, Dowle E, Duntsch L, Galla SJ, Howell L, Magid M, Rayne A , Verry AJF, Wold J, Steeves TE. Current applications and future promise of genetic/genomic data for conservation in an Aotearoa New Zealand context. In Press at <i>Science for Conservation</i> . [DOI]
2022	Rayne A , Blair S, Dale M, Flack B, Hollows J, Moraga R, Parata RN, Rupene M, Tamati-Elliffe P, Wehi PM, Wylie MJ, Steeves TE. Weaving place-based knowledge for culturally significant species in the age of genomics: Looking to the past to navigate the future. <i>Evol Appl</i> 15:751–772. [DOI] [PDF]
2020	Rayne A , Byrnes G, Collier-Robinson L, Hollows J, McIntosh A, Ramsden M, Rupene M, Tamati-Elliffe P, Thoms C, Steeves TE. Centring Indigenous knowledge systems to re-imagine conservation translocations. <i>People & Nat</i> 2:512–526. [DOI] [PDF]
2019	Collier-Robinson L, Rayne A , Rupene M, Thoms C, Steeves TE. Embedding Indigenous principles in genomic research of culturally significant species. <i>NZ J Ecol</i> 43:3389. [DOI] [PDF]

PRE-PRINTS & PAPERS IN PREPARATION/REVIEW/REVISION

- 2022 pre-print Parker KA, Ewen JG, Weiser EL, **Rayne A**, Steeves TE, Seddon PJ, ... Armstrong DP. Contemporary conservation translocations are foundational to Predator-Free aspirations in Aotearoa New Zealand: a review. *EcoEvoRxiv (In Review for NZ J Ecol)*. [\[DOI\]](#)
- In Prep Cox B, **Rayne A**, Sharp E, Walker L, Steeves TE. Allyship and self-determination: Caring-with in academic spaces.
- In Prep Finlay-Smiths S, McRae K, **Rayne A**, Palmer S, Warburton H. Reflecting on the Challenge: impacts of being involved in New Zealand's Biological Heritage National Science Challenge. In preparation for submission to *J R Soc NZ*
- In Prep **Rayne A**, Cox B, Sharp E, Walker L, Wehi C, Steeves TE. Kindness in science: I do not think it means what you think it means. In preparation for submission to *eLife*
- In Prep **Rayne A**, Pawlick, Steeves TE. Caring-with in peer review. In preparation for submission to *NZES Hot Topics*
- In Prep Sharp E, Cox B, **Rayne A**. The 'Good Kiwi' and the 'Good Climate Citizen': Dairy consumption, national identity and complex climate-related values in Aotearoa New Zealand. In preparation for submission to *J Rural Stud*

OTHER FORMS OF DISSEMINATION

- In Prep Article for the Spinoff *Brilliant assholes and the kindness of aunties*
- 2022 Contributed to Te Pūnaha Matatini submission on Te Ara Paerangi *Building an ethical, agile, collaborative research system* [\[HTML\]](#)
- 2021 Interview for RNZ's Our Changing World podcast *Collaborating to move freshwater species* [\[HTML\]](#)
- 2021 Invited article for Wiley *Centring Indigenous ways of knowing to enhance resilience* [\[HTML\]](#)
- 2020 The Conversation *When rehoming wildlife, Indigenous leadership delivers the best results* [\[HTML\]](#)
- 2020 Bioheritage blog *How can we best use genomics to enhance conservation translocations?* [\[HTML\]](#)
- 2019 UC annual Research Report *Securing sustainable kai: a conservation genomics approach* [\[PDF\]](#)
- 2019 Featured in UCMe campaign for the University of Canterbury [\[HTML\]](#)
- 2019 Contributed to expert commentary with A/Prof Tammy Steeves on new biodiversity strategy *Te Koiroa o Te Koiroa* [\[HTML\]](#)
- 2019 Bioheritage blog *Cutting-edge technology to help mahinga kai species* [\[HTML\]](#)

SELECTED TALKS

- 2022 *Allyship and self-determination: Caring-with in academic spaces*. Feminist Geographies 2022. Boulder, Colorado, U.S.A (co-presented virtually with Dr Emma Sharp & Bethany Cox. Pre-recorded for June 17)
- 2022 *Ngā Pi Ka Rere: Early Careers taking flight*. Crazy & Ambitious 3 (co-presented virtually with Dr Kathryn McRae, Dr Helen Warburton & Symon Palmer)
- 2022 Invited virtual keynote *Looking to the past to navigate the future: Weaving place-based knowledge for culturally significant species in the age of genomics*. MAPNET, Plant & Food Research
- 2021 Invited talk *Weaving ways of knowing to enhance biocultural resilience in a mahinga kai species-at-risk*. Waterways. Ōtautahi Christchurch
- 2021 Invited virtual talk on *Applied Genomics & NZ Indigenous Engagement*, Australasian Genomic Technologies Association. Sydney, Australia [\[WATCH ONLINE\]](#)

- 2021 Invited virtual talk *Enhancing biocultural resilience in a mahinga kai species-at-risk*. IAGLR. Windsor, Canada
- 2020 *Re-imagining conservation translocations through Two-Eyed Seeing*. Hawai'i Conservation Alliance. Honolulu, Hawai'i (presented virtually)
- 2019 *Have your kēkēwai and eat it too: Bridging species and ecosystem recovery*. NZ Ecological Society Conference. Lincoln
- 2019 *New knowledge, old legislation: An integrative approach for enhancing resilience in Aotearoa New Zealand's threatened freshwater biota*. ICCB. Kuala Lumpur, Malaysia.
- 2019 *Underwater, out of mind? A call for integrative legislation reform, Crazy & Ambitious 2*. Wellington.
- 2018 *Critical first steps toward enhancing resilience in two threatened freshwater endemics*, UNVEIL Symposium. Flathead Lake, Montana, U.S.A. (co-presented with Levi Collier-Robinson).