Aisling Lilian Rayne

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Expertise

conservation genomics • biocultural diversity • data sovereignty • bioinformatics • freshwater ecology • Kindness in Science

Professional experience

University of Canterbury

2021–present 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

Centre for Sustainability, University of Otago

2021–present Key Researcher
Kindness in Science project, Te Pūnaha o Matatini *(pending)*

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

2021–present Technical Advisor, **Te Pātaka a Tahu (MABx)**, Te Rūnanga o Ngāi Tahu
2020–present Member, **High Quality Genomes and Population Genomics**, Genomics Aotearoa
2020–present Member, **Technical Advisory Group on Regenerative Farming Practices**, Ministry for Primary Industries
2019–present Member, **Te Pūnaha Matatini Whānau**, Te Pūnaha Matatini
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)

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

Publications & talks

Peer-reviewed articles

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. *People and Nature*. 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: a conservation genomics case study. *NZ Journal of Ecology*. 43: 3389. [DOI] [PDF]

Pre-prints & Papers in Preparation/Review/Revision

In Review **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. *Evolutionary Applications*.
In Revision Collier-Robinson L, **Rayne A**, Hudson M, Stott MB, Steeves TE. Realising benefits for Indigenous Peoples in genomic research of culturally significant species. *Nature Genetics*.
2021 pre-print 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. *EcoEvoRxiv*. [DOI]
2021 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*. [DOI]

Other forms of dissemination

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 student blog *How can we best use genomics to enhance conservation translocations?* [HTML]
2019 *Securing sustainable kai: a conservation genomics approach* for UC annual Research Report [PDF]
2019 Featured in UCMe campaign for the University of Canterbury [HTML]
2019 Contributed to expert commentary on new biodiversity strategy *Te Koiroa O Te Koiora*
2019 Bioheritage blog *Cutting-edge technology to help mahinga kai species* [HTML]

Selected talks

2021 invited virtual talk on *Applied Genomics & NZ Indigenous Engagement*, AGTA. [WATCH ONLINE]
2021 invited virtual talk *Enhancing biocultural resilience in a mahinga kai species-at-risk.* IAGLR, Canada.
2020 *Re-imagining conservation translocations through Two-Eyed Seeing.* Hawai'i Conservation Alliance.
2019 *Have your kēkēwai and eat it too: Bridging species and ecosystem recovery.* New Zealand Ecological Society Conference, Lincoln University.
2019 *New knowledge, old legislation: An integrative approach for enhancing resilience in Aotearoa New Zealand's threatened freshwater biota.* International Congress for Conservation Biology, Malaysia.
2019 *Underwater, out of mind? A call for integrative legislation reform*, Crazy & Ambitious 2 Symposium, Te Papa, Wellington.
2018 *Critical first steps toward enhancing resilience in two threatened freshwater endemics*, UNVEIL Symposium, U.S.A. (co-presented with Levi Collier-Robinson).