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Research profile

My research is focuses on understanding processes that generate biodiversity on our planet. I am especially interested in how barriers to gene flow evolve between populations, leading to the origin of new species. I seek to reveal the genetic and genomic basis of key ecological traits, and how factors like geography and natural hybridization facilitate and constrain evolutionary change. I have addressed these problems in diverse radiations of plants and animals using a broad toolkit, including cutting edge genomic techniques and field and laboratory studies.

Professional experience & education

- 2020 – 2025 | **Research Fellow:** IST Austria, the genomic of fitness variation and barriers to gene flow in the snapdragon hybrid zone. With: Dr. Professor Nick Barton & Dr. David Field
- 2017 – 2020 | **Postdoctoral Scholar:** University of Sheffield, Department of Animal and Plant Sciences. *Speciation in the genus *Littonia**. With: Prof. Roger K. Butlin. 2017 – 2020
- 2013 – 2017 | **Postdoctoral Scholar:** Streisfeld Lab, University of Oregon, Institute of Ecology and Evolution, Oregon, USA *Genomics of ecological speciation in *Mimulus**. With: Prof. Matthew A. Streisfeld.
- 2007 – 2012 | **PhD, University of Western Australia, Perth, Australia.** *Evolution of *Rhagada* land snails in the Dampier Archipelago: The roles of history and selection*. With: Winthrop Prof. Michael S. Johnson. 2007 – 2012
- 2002 – 2006 | **B.Sc., Edith Cowan University Perth, Australia** Biology with First Class Honors
Thesis title: *Genetic diversity and gene flow in a rare animal pollinated shrub, *Calothamnus teretifolius**. With: Dr. Ian Bennett and Dr. Margaret Byrne

Professional memberships

Society for the Study of Evolution (SSE)

Publications

Submitted and in preparation

- Stankowski S**, Ravinet M. Defining the speciation continuum. *Submitted to Evolution*.
- Salces-Castellano A, **Stankowski S**, Arribas P, Patiño J, Butlin RK & Emerson B. A cloud forest response to Quaternary climate change revealed by beetle speciation history *Submitted to Evolution*.
- Stankowski S**, McIntosh H, Streisfeld MS. The genomic landscape underlying local adaptation and barriers to gene flow in a monkeyflower. In prep.
- Stankowski S**, Westram AM, Zagrodzka Z, Broquet T, Johannesson K, Butlin RK. Strong premating barriers contribute to reproductive isolation between sympatric intertidal snails. In prep.

Accepted

- 22 | **Stankowski S**, Westram AM, Zagrodzka Z, Eyres I, Broquet T, Johannesson K, Butlin RK. The evolution of strong reproductive isolation between sympatric intertidal snails. *Philosophical Transactions of the Royal Society B*.
- 21 | Curran EV, **Stankowski S**, Pardo-Diaz C, Salazar C, Linares M, Nadeau NJ. Parallel clines in a quantitative trait in butterfly co-mimics species despite different levels of genomic divergence and selection. *Molecular Ecology*.
- 20 | Butlin R.K and **Stankowski S**. Is it time to abandon the biological species concept? No. National Science review. In press.
- 19 | **Stankowski S**, Chase M, Fuiten A, Ralph P, and Streisfeld MS. 2019. Widespread selection and gene flow shape the genomic landscape during a radiation of monkeyflowers. *PLOS Biology*.

- 18 | Sobel JM, **Stankowski S**, and Streisfeld MA. Variation in physiological traits contributes to ecogeographic isolation between parapatric ecotypes of *Mimulus aurantiacus*. *Journal of Evolutionary Biology*.
- 17 | Johnson MS, **Stankowski S**. 2018. Changed perspectives from a taxonomic synonymy: extreme morphological diversity across the radiation of *Rhagada elachystoma* (von Martens, 1878) (Gastropoda: Camaenidae). *Journal of Molluscan Studies*.
- 16 | Chase M, **Stankowski S**, Streisfeld MS. 2017. Genome-wide variation provides insight into evolutionary relationships in a monkeyflower species complex (*Mimulus* sect. *Diplacus*). *American Journal of Botany*.
- 15 | Rosser N, Thomas L, **Stankowski S**, Richards ZT, Kennington J, Johnson M. 2017. Phylogenomics provides new insight into evolutionary relationships and speciation in *Acropora* corals. *Proceedings of the Royal Society B: Biological Sciences*.
- 14 | **Stankowski S**, Sobel JM, and Streisfeld MA. 2017. Geographic cline analysis as a tool for studying genome-wide variation: a case study of pollinator-mediated divergence in a monkeyflower. *Molecular Ecology Special Issue: The Molecular Mechanisms of Adaptation and Speciation: Integrating Genomic and Molecular Approaches*.
- 13 | Johnson MS, **Stankowski S**, Kendrick P, Teale RJ, Hamilton ZR. 2016. Diversity, complementary distributions and taxonomy of *Rhagada* (Gastropoda: Camaenidae) land snails on the Burrup Peninsula, Western Australia. *Invertebrate Systematics*.
- 12 | **Stankowski S**, Sobel JM and Streisfeld MA. 2015. The geography of divergence-with-gene-flow facilitates multi-trait adaptation and the evolution of pollinator isolation in *Mimulus auranticus*. *Evolution*.
- 11 | **Stankowski S** and Stresifeld MA. 2015. Adaptive introgression facilitates adaptive divergence in a recent radiation of Monkeyflowers. *Proceedings of the Royal Society B: Biological Sciences*.
- 10 | **Stankowski S**. 2015. Layers of contingency shroud pervasive ecological divergence in a local radiation. *Biological Journal of the Linnean Society*.
- 9 | Taylor JPA, Johnson MS, **Stankowski S**. Molecular phylogenetics and complementary geographical distributions of species of the Western Australian land snail genera *Plectorhagada* Iredale, 1933 and *Strepsitaurus*, 1997 (Gastropoda Camaenidae). *Zoological Journal of the Linnean Society*.
- 8 | **Stankowski S**, Johnson MS. 2015. Biogeographic disparity of molecular phylogenetic and phenotypic variation in a continental archipelago radiation of land snails. *BMC Evolutionary Biology*.
- 7 | **Stankowski S**. 2014. The density of empty shells, not habitat cover or quality, predicts the density of live *Rhagada* snails. *Molluscan Research*.
6. | **Stankowski S**. The density of empty shells, not habitat cover or quality, predicts the density of live *Rhagada* snails. *Molluscan Research*.
- 5 | Sampson J, Byrne M, Yates C, Gibson N, Thavornkanlapachi R, **Stankowski S**, MacDonald B, Bennett I. 2013 Contemporary pollen-mediated gene dispersal reflects the historical isolation of a shrub with a patchy distribution in a fragmented landscape. *Heredity*.
- 4 | **Stankowski S**. Ecological speciation in an island snail: evidence for the parallel evolution of a novel ecotype and maintenance by ecologically dependent postzygotic isolation. *Molecular Ecology*.
- 3 | Johnson MS, **Stankowski S**, Whisson CS, Teale RJ, Hamilton ZR. 2013 Camaenid land snails on Barrow Island: distributions, molecular phylogenetics and taxonomic revision. *Records of the Western Australian Museum*.
- 2 | **Stankowski S**. 2011. Extreme, continuous variation in an island snail: local diversification and association with the current environment. *Biological Journal of the Linnean Society*.
- 1 | Byrne M, Hankinson M, Sampson JF, **Stankowski S**. 2008. Microsatellite markers from a polyploid saltbush, *Atriplex nummularia* Lindl. *Molecular Ecology Resources*.

Oral presentations

- 16 | 2020 Speciation Genomics, Cambridge, UK – Invited speaker.
- 17 | 2020 IST Austria, Australia.
- 14 | 2019 Gordon Research Conference: Speciation, Ventura, California, USA – Talk

- 13 | 2019 Gordon Research Conference: Speciation, Ventura, California, USA – Poster
- 12 | 2018 Speciation Genomics, Cambridge, UK – Talk
- 11 | 2017 Popgroup, University of Bristol, UK – Talk
- 10 | 2016 Evo-Wibo conference, Port Townsend, WA, USA – Poster
- 9 | 2015 Willamette University, Oregon, USA – Invited Talk
- 8 | 2015 Gordon Conference on Speciation, Ventura CA, USA – Poster
- 7 | 2015 Evo-Wibo conference, Port Townsend, WA, USA – Talk
- 6 | 2014 Evolution, Raleigh, North Carolina – Talk
- 5 | 2013 University of Nottingham, UK – Invited Talk
- 4 | 2012 Australasian Congress of Malacology, University of Melbourne, Australia – Talk
- 3 | 2010 World Congress of Malacology, Phuket, Thailand – Talk
- 2 | 2009 Australasian Congress of Malacology, University of Queensland, Australia – Talk
- 1 | 2009 Darwin's Legacy, University of North Carolina, Wilmington – Talk

Scholarships and Awards

- 2019 **Best presentation** from an early career researcher at GRC on Speciation.
- 2013 **Travel Award**, University of Nottingham \$1,750
- 2009 **Best student presentation** at Darwin's Legacy, University of North Carolina, Wilmington
- 2009 **Student Travel Award**, University of North Carolina, Wilmington
- 2008 **Postgraduate Scholarship**, WA Department of Environment and Conservation \$15,000
- 2008 **Australian Postgraduate Award** \$65,000
- 2006 **Royal Society of Western Australia Medal**: awarded to an outstanding Honors student
- 2006 **Mount Lawley Teacher College Prize**: awarded to an outstanding Honors student
- 2005 **Science and Innovation Studentship Award**: \$7,500
- 2005 **Winter Scholarship**, Australian Institute of Nuclear Science and Engineering \$10,000
- 2005 **Bio-Rad Molecular Biology Prize**: for highest aggregate score in intro to molecular biology and advanced molecular biology

Grants awarded

- 2019 Marie Skłodowska-Curie European Fellowship (€160,932)
- 2008 Ad-Hoc Postgraduate Scholarship, WA Department of Environment and Conservation (\$15,000)
- 2008 Australian Postgraduate Award (\$65,000)

Referee work

Evolution (4), *The American Naturalist* (1), *Molecular Ecology* (7), *Journal of Biogeography* (1), *Scientific Reports* (1), *Heredity* (1), *Molecular Phylogenetics and Evolution* (5), *Journal of Heredity* (1), *Biological Journal of the Linnean Society* (3), *Zoological Journal of the Linnean Society* (1), *Molecular Ecology Resources* (1), *PLOS one* (1), *American Journal of Botany* (1), *PLoS Genetics* (2). *Proceedings of the National Academy of Sciences* (1.)

Editorial work

Guest editor for a special issue in the *Journal of Evolutionary biology*, 'Speciation in the marine environment'

Student supervision

PhD students

- Toñi Salces Castellano (PhD) (Instituto de Productos Naturales y Agrobiología) 2018 – 2018
- Joshua Bahr (PhD) (U. Oregon) 2013 – 2014

Masters students

- William Delumpa (U. Oregon)
- Morgan Marsh (U. Oregon)
- Raleigh Foster (U. Oregon)
- Brian Perrett (U. Oregon)
- Katherine Hearn (MSc) (U. Oregon) 2017 – 2018
- Madeline Chase (MSc) (U. Oregon) 2015 – 2017

Undergraduate students

Madeline Chase (U. Oregon) 2014 – 2015
Connor Benson (U. Oregon) 2014 – 2015
Bryce Winkelman (U. Oregon) 2014 – 2015
Alex Davis (U. Oregon) 2015 – 2016
Tyler Rietz (U. Oregon) 2015 – 2016
Julia Metzler (U. Oregon) 2015 – 2016
Brian Perrett (U. Oregon) 2015 – 2016
Xander Berenstein (U. Oregon) 2016 – 2017
Hanna McIntosh (U. Oregon) 2016 – 2018
Connor Lane (U. Oregon) 2016 – 2018
Zipporah Bannister (U. Sheffield) 2018 – 2019
Laura Klages (U. Sheffield) 2018 – present

Honors thesis examiner

Julia Metzler (U. Oregon) 2015 – 2016

Graduate Teaching assistant

Genetics and Evolution: (400 level) University of Western Australia
Conservation Biology (300 level) University of Western Australia
Animal Ecology: (400 level) University of Western Australia

Undergraduate teaching assistant

Plant Physiology and Adaptation: (300 level) Edith Cowan University
Form and Function in Biology (200 level) Edith Cowan University

Guest lecturer

Curtin University of Technology: Evolutionary Genetics (400 level)
University of Western Australia: Conservation Biology (400 level)
University of Western Australia: Genetics and Evolution (400 level)
Willamette University: Evolutionary Ecology (300 level)
University of Oregon: Bioinformatics (500 level)

Formal lecturing experience and curriculum development

Introduction to data visualization Institute of Science and Technology Austria 2021 (Scheduled)
Introduction to wetlab. Institute of Science and Technology Austria 2020
APS 125: Genes in Populations. Animal and plant Sciences, University of Sheffield 2019 – 2020
APS 344: Topics in Evolutionary Genetics, Animal and plant Sciences University of Sheffield 2018 – 2019

References**Prof. Michael S. Johnson (PhD advisor)**

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Prof. Roger K. Butlin (Postdoc Advisor)

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Western Bank, S10 T2N, UK
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Prof. Nicholas Barton (Postdoc Advisor)

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