

Linnea Sandell Academic CV

linnea.sandell@icloud.com · (+46)73 781 3367 · linneasandell.github.io

Current position Researcher at Swedish Biodiversity Centre at **Swedish Agricultural University**.

Education

University of British Columbia, Vancouver, Canada
PhD. in Zoology, Sep 2015 - Nov 2021

- Thesis title: Experiments of sexual selection and ploidy-specific effects of mutations in yeast
- Supervised by Dr. Sarah P. Otto

University of Groningen, Groningen, the Netherlands
MSc. in Ecology and Evolution, Sep 2013 - Aug 2015

- Thesis title: Attempt at dating selective signatures in tetraploid *Arabidopsis arenosa*
- Supervised by Dr. Kirsten Bomblies, Dr. John Wakely, Dr. Franjo Weissing

University of Montpellier II, Montpellier, France
MSc. in Evolutionary Biology, Sep 2013 - Aug 2015

- Thesis title: The Evolution of sex in adaptive landscape models
- Supervised by Dr. Denis Roze

Uppsala University, Uppsala, Sweden
BSc. in Biology, Sep 2010 - Aug 2013

- Independent work: Genetic methods to map the anatomically modern human migration (in Swedish)

Other research experience

Uppsala University, Uppsala, Sweden
Carl Tryggers postdoctoral fellow with Aaron Vogan

University of British Columbia, Vancouver, Canada, and **University of Montpellier**, Montpellier, France,
Doctoral research assistant, May 2019 - May 2021

- Modelling the effect of environmental change on the phenotypic optimum in a single cohort with a stage structured life cycle.
- Supervised by Dr. Ophélie Ronce

University of Montpellier, Montpellier, France
Independent project, April 2014 - June 2014

- Adaptation to Climate Change in a Stage-structured Population
- Supervised by Dr. Ophélie Ronce

Uppsala University, Uppsala, Sweden
Undergraduate research internship, June 2013
DNA-extraction and handling of greenhouses
Supervised by Dr. Karl Holm, in the Lascoux lab

Papers

L. Sandell, N. P. Sharp. 2022. [Fitness effects of mutations: An assessment of PROVEAN predictions using mutation accumulation data](#). Genome Biology and Evolution 14 (1).

O. Cotto*, L. Sandell*, LM. Chevin, O. Ronce. 2019. [Maladaptive Shifts in Life History in a Changing Environment](#). The American Naturalist 194 (2) *Equal contribution

E. Vanhoenacker, L. Sandell, D. Roze. 2018. [Stabilizing selection, mutational bias, and the evolution of sex](#). Evolution 72 (9), 1740-1758

N. P. Sharp, L. Sandell, C. G. James, S. P. Otto 2018. [The genome-wide rate and spectrum of spontaneous mutations differ between haploid and diploid yeast](#). Proceedings of the National Academy of Sciences

L. Sandell, S. P. Otto 2016. [Probing the Depths of Biological Diversity During the Second Century of GENETICS](#). GENETICS vol. 204 no. 2 pp. 395-400

Papers in preparation

L. Sandell, N. P. Sharp, S. P. Otto. A suite of traits responds to an increase in the frequency of sexual reproduction in *Saccharomyces cerevisiae*.

A. Erlichman*, L. Sandell*, S. Otto, S. Aitken, O. Ronce. Planting long-lived trees in a warming climate: investigating a trade-off in the optimal provenance.

L. Sandell, S. Koenig, S. P. Otto. Schrödinger's yeast: The challenge of using transformation to compare fitness among *Saccharomyces cerevisiae* that differ in ploidy or zygosity.

Academic honours and awards

- The Nilsson-Ehle Endowments (SEK 27 600), 2021
- Travel grant holder, awarded by The American Genetics Association Symposium (USD 300), 2019
- Graduate Student Travel Award, awarded by UBC's Faculty of Graduate and Postdoctoral Studies (CAD 493.33), 2019
- St John's College George Shen Fellowship (CAD 600), 2017
- St John's College Charles CC & Sophia Wong Memorial Fellowship (CAD 3,400), 2017
- [Four Year Fellowship](#), awarded by UBC's Faculty of Graduate and Postdoctoral Studies (CAD 72,800), 2016 – 2020
- [Four Year Fellowship](#) Tuition award, awarded by UBC's Faculty of Graduate and Postdoctoral Studies (tuition costs), 2016 – 2020
- Erasmus Mundus Scholarship, awarded by the European Union (EUR 20 000), 2013 – 2015
- Travel grant holder, Vienna Biocentre PhD Symposium, 2014
- Adolf Lindgrens stiftelse (SEK 25 000), 2014
- Per Erikssons stiftelse (SEK 24 000, 2012 and SEK 24 000, 2013)
- Adolf Lindgrens stiftelse (SEK 22 000), 2012

Teaching

Mentorship

- Anna Mirandola, MSc student. Supervision in the lab and in writing. Vogan lab, Uppsala.
- BSc students in Sweden (forskningsprojekt): Samuel Jorajev. Vogan lab, Uppsala.
- BSc students in Canada (work-learn internships): Matthew Stasiuk, Lesley Miller, Chris James, Christina Hsu, Kismet Somal, Bryn Wiley.

Skills

- Instructional Skills Workshop, UBC Centre for Teaching, Learning and Technology, 2016
- Alla Lika Alla Olika (All Different All Equal) Certified education in norm critical pedagogy, value based leadership, and interactive exercises. 2009

Teacher assistantships

University of British Columbia, Vancouver, Canada, 2015 - 2019

- BIOL 337 Introductory Genetics Laboratory (two terms). Assisted during lab sessions, graded lab reports, weekly quizzes, lab skills, and oral presentations.
- BIOL 301 Biomathematics. Taught computer lab component in Mathematica, graded weekly homeworks and finals
- BIOL 336 Fundamentals of Evolutionary Biology. Held weekly tutorials with paper discussions. Graded papers, weekly homeworks, and finals.
- BIOL 234 Fundamentals of Genetics (two terms). Ran weekly tutorials with practical genetics questions. Graded weekly homeworks, and finals.

Other teaching and outreach experience

- Beaty Biodiversity museum, Invited guest presentation to the EDCP 354 (302) class, 2016
- University of British Columbia, St John's College, Resident Fellow Speaker Series: Biodiversity, Bioliteracy, and Ecojustice — A Roundtable Discussion 2016
- Let's Talk Science, University of British Columbia, Volunteer, 2015
- Beaty Biodiversity Museum in Vancouver, Museum Educator (volunteer) 2015-2018

Selected presentations

- European Congress of Fungal Genetics, *Meiotic driver homologs in asexual Fusarium species*, 2023
- Congress of the European Society for Evolutionary Biology, *Meiotic driver homologs in asexual Fusarium species*, 2022
- SystBio seminar, *Experimental Evolution and Fitness Effects of Mutations in Yeast*, 2021
- BLISS seminar, [Experimental Evolution and Fitness Effects of Mutations in Yeast](#), 2021
- Vancouver Yeast Meeting, *Sex, drugs, and mating efficiency in S. cerevisiae*, 2019
- The American Genetics Association Symposium (Sex and Asex: The Genetics of Complex Life Cycles): *Sex, drugs, and mating competition: effects of frequent outcrossing in Saccharomyces cerevisiae*, 2019
- Eco Evo retreat, Data blitz, *From function to fitness: comparing predicted functional effects to growth rates of mutation accumulation lines*, 2018
- University of British Columbia, 3 Minute Thesis competition (semi-finalist): [Role of Sociality in the Evolution of Recombination](#), 2016
- University of British Columbia, St John's College, Resident Fellow Speaker Series: *Why sex?* 2016
- Ludwig Maximilian University of Munich, Erasmus Mundus Summer school, presentation. *Meiotic evolution in autotetraploids, A case study of Arabidopsis arenosa*, 2015

Selected posters

- European Congress of Fungal Genetics, *Meiotic driver homologs in asexual Fusarium species* 2023
- Evolution meeting, Portland, poster, [Estimating growth rate from OD data in budding yeast](#), 2017
- Ecology and Evolution retreat, Squamish, poster. *Social structure and selection for recombination* 2015

Languages

Natural English (advanced), Swedish (fluent), French (intermediate), Portuguese (intermediate)
Programming R (advanced), Mathematica (intermediate), C++ (beginner)

Service

- Systematic biology seminar series, Uppsala, 2021-2023. Coordinator.
- Let's assume discussion group, University of British Columbia, 2019. Coordinator.
- St John's College Dining Society, President 2017-2018
- St John's College Social Committee, Vice president 2016-2017
- Otto lab meetings, coordinator, 2016
- Biodiversity Research Seminar, Coffee organizer, 2016
- Biodiversity Lunchtime Internal Seminar Series, Coordinator, 2016
- Biology Education Centre in Uppsala, Blogger (<http://memebloggen.wordpress.com>) 2013-2015
- Dutch Royal Zoological Conference Individual Differences, Volunteer, 2013
- Student newspaper Bladet at Uppsala, Columnist, 2012-2013

References

Dr. Aaron Vogan, Group leader
Department of Organismal Biology, Uppsala University
Email aaron.vogan@ebc.uu.se

Dr. Sarah P. Otto, PhD supervisor
Department of Zoology, University of British Columbia
Email otto@zoology.ubc.ca

Dr. Nathaniel Sharp, Senior collaborator
Department of Evolutionary Genetics, University of Wisconsin-Madison
Email nathaniel.sharp@wisc.edu