

Katherine (Kate) L. Wootton

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CURRENT POSITION

Postdoctoral Associate

Project: Mapping the Structure and Dynamics of the Scientific Ecosystem

Principal Investigators: Daniel Larremore and Aaron Clauset

Department of Computer Science & BioFrontiers Institute

University of Colorado Boulder

EDUCATION

2020 PhD in Ecology

Department of Ecology

Swedish University of Agricultural Sciences

Almas Allé 8, 750 07 Uppsala, Sweden

Supervisor: Professor Tomas Roslin

Co-supervisors: Prof. Riccardo Bommarco, Prof. Tomas Jonsson, Dr Alva Curtsdotter

Thesis title: Love (eating) thy neighbour? Understanding and predicting food-web structure and dynamics

Opponent: Kevin McCann

2015 Master of Science, First Class Honours

School of Biological Sciences

University of Canterbury, Christchurch, New Zealand

Supervisor: Dr. Daniel Stouffer

Co-supervisor: Professor Angus McIntosh

Thesis title: Fitting species into the complexity-stability debate

Thesis grade: A+

GPA: 9.0

2012 Bachelor of Science

School of Biological Sciences

University of Canterbury, Christchurch, New Zealand

GPA: 9.0

2011-2012 Study Abroad Exchange

University of British Columbia, Vancouver, Canada

GRANTS AND AWARDS

- 2019 Travel grant, Knut och Alice Wallenbergs Foundation (23,000 SEK)
- 2019 Travel grant, Knut och Alice Wallenbergs Foundation (35,000 SEK)
- 2018 Jan Pettersson travel grant (10,000 SEK)
- 2014 Travel award from the Canterbury Branch, Royal Society of New Zealand (\$NZ1000)
- 2014 Conference Presentation Travel Award from the Canterbury Branch, New Zealand Federation of Graduate Women (\$NZ800)
- 2014 3rd Place Masters/Honours section, Annual Biology Conference, University of Canterbury (\$NZ100)
- 2013 University of Canterbury Masters Scholarship (\$NZ12,000 plus fees)
- 2012 – 2013 William Georgetti Award (\$NZ14,000 per annum)
- 2012 University of Canterbury Alumni Award (\$NZ5000)
- 2012 Sadie Balkind Scholarship, NZFGW (\$NZ6000)
- 2012 University Scholarship, Freemasons (\$NZ6000)
- 2012 University of Canterbury Senior Scholarship (\$NZ2000)
- 2011 University of Canterbury Summer Scholarship (\$NZ6000)

PUBLICATIONS

- 2021 Shaw, Jack; Coco, Emily; **Wootton, K.L.**, Daems, Dries; Gillreath-Brown, Andrew; Swain, Anshuman; Dunne, Jennifer “Disentangling ecological and taphonomic signals in ancient food webs” *Paleobiology* (in press)
- 2019 Cagua, Edgar Fernando; **Wootton, K.L.**; Stouffer, Daniel “Keystoneness, centrality, and the structural controllability of ecological networks” *Journal of Ecology* 107 (4) 1779 - 1790
- 2019 Cirtwill, Alyssa; Eklöf, Anna; Roslin, Tomas; **Wootton, K.L.**; Gravel, Dominique “A quantitative framework for investigating the reliability of empirical network construction” *Methods in Ecology and Evolution* 10(6), pp. 902-911
- 2018 A.N. Laubmeier*, **K.L. Wootton***, J.E. Banks, Riccardo Bommarco, Alva Curtsdotter, Tomas Jonsson, Tomas Roslin, H.T. Banks “From theory to experimental design - quantifying a trait-based theory of predator-prey dynamics” *PLOS ONE* 13 (4), e0195919
- 2017 **Wootton, K.L.** “Omnivory and stability in freshwater habitats: Does theory match reality?” *Freshwater Biology* 62 (5) 821–832
- 2016 **Wootton, K.L.** & Stouffer, D.B. “Many weak interactions and few strong; food-web feasibility depends on the combination of the strength of species’ interactions and their correct arrangement”. *Theoretical Ecology* 9 (2) 185-195

- 2016 **Wootton, K.L.** & Stouffer, D.B. “Species’ traits and food-web complexity interactively affect a food web’s response to press disturbance”. *Ecosphere* 7 (11) e01518

**Co-first authors*

CONTRIBUTED PRESENTATIONS

- 2019 **Traits as predictors of interaction structure and strength in a spatially extensive set of tritrophic networks**
Oral presentation
4th Symposium on Ecological Networks, Paris, France
- 2018 **Microhabitat use, mesocosms and models in multitrophic communities; using species traits to predict community dynamics**
Student plenary
Quantitative Ecology BES Annual Meeting, St Andrews, Scotland
- 2018 **Microhabitat use, mesocosms and models in multitrophic communities; using species traits to predict community dynamics**
Oral presentation
Inter-group meeting, Tartu, Estonia
- 2018 Oikos Annual Meeting, Trondheim, Norway (Poster)
- 2017 **Microhabitat use, mesocosms and models in multitrophic communities; using species traits to predict community dynamics**
Oral presentation in themed session “Integrating functional traits in interaction networks to predict ecosystem functioning”
Ecology Across Borders: Joint Annual Meeting (BES, GFÖ, VecoV, EEF), Ghent, Belgium
- 2017 *Ecological Networks and Molecular Analysis of Trophic Interactions, SLU, Uppsala, Sweden* (Poster)
- 2016 **Many weak links and a few strong – how food-web structure affects stability**
Oral presentation
Trophic Interactions Seminar, SLU, Uppsala, Sweden
- 2014 **How far is too far when perturbing a food web?**
Oral presentation
ESA Annual Meeting, Sacramento, California, USA
- 2014 *BIC/Bluefern Symposium, University of Canterbury, Christchurch, New Zealand* (Oral presentation)
- 2014 **How far is too far when perturbing a food web?**
Oral presentation
ABC Annual Biology Conference, University of Canterbury, Christchurch, New Zealand

TEACHING

- 2017 - 2020 PhD student representative on Ecology Research School steering committee
- 2019 *Course development* – Ethics and Philosophy of Ecology (PhD level)
- 2018 *Teaching assistant* – Entomology (Undergraduate level)
- 2016 *Course development* – Trophic Interactions Literature Course (PhD level)
- 2015 *Teaching assistant* – BIOL 209, Biostatistics
- 2014 *Teaching assistant* – BIOL 309, Biostatistics
- 2014 *Teaching assistant* – BIOL 209, Biostatistics
- 2014 *Teaching assistant* – BIOL 113, Diversity of Life

PROFESSIONAL EXPERIENCE

- 2015 – 2016 Biodiversity Ranger
DOC Inventory and Monitoring Programme
Department of Conservation,
Invercargill, New Zealand
- 2015 Tutor (Biostatistics)
NZ Aid
Christchurch, New Zealand
- 2012 – 2013 Summer Scholarship Recipient
Freshwater Ecology Research Group & Stouffer Lab
School of Biological Sciences
University of Canterbury, New Zealand
- 2012 Lab assistant
Freshwater Ecology Research Group
School of Biological Sciences
University of Canterbury, New Zealand
- 2010 – 2011 Australasian Crested Grebe breeding success monitoring
Funded by BayerBoost Scholarship
Department of Conservation
Hakaterere, New Zealand

SCIENTIFIC COMMUNITY

- 2020 Review for Ecography
- 2018 Review for American Naturalist
- 2018 Review for Communications Biology
- 2018 Review for Ecology
- 2017 Review for NZ Journal of Ecology