

Takuji Usui

Department of Botany and Biodiversity Research Centre
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EDUCATION

University of British Columbia | 2017 – current

PhD, Biodiversity Research Centre and Department of Botany

Advisor: Dr. Amy Angert

Committee: Rachel Germain, Sally Otto, Michelle Tseng, and Jennifer Williams

University of Edinburgh | 2011 – 2015

BSc in Evolutionary Biology (First Class Honours)

Thesis: A global meta-analysis on avian migratory phenology: predicting variation in the advancement of spring arrival dates in response to climate change

Advisor: Dr. Ally Phillimore

PUBLICATIONS

9. **Usui, T.**, Senior, A., MacLeod, M., McCann, S., & Nakagawa, S. (2021) Meta-analysis of variation suggests that embracing heterogeneity improves both replicability and generalizability in preclinical research. *PloS Biology*, 19(5), e3001009. doi: 10.1371/journal.pbio.3001009

8. Bontrager, M., **Usui, T.**, Lee-Yaw, J.A., Anstett, D.N., Branch, H.A., Hargreaves, A.L., Angert, A.L. (2021) Adaptation across geographic ranges is consistent with strong selection in marginal climates and legacies of range expansion. *Evolution*, 75, 1316–1333.

7. Germain, R.M., Angert, A.L., Bassar, R.D., Henao Diaz, F.L., Hart, S.P., Otto, S.P., Rolland, J., Sakarchi, J., Schluter, D., Siepielski, A.M., Turcotte, M.M., **Usui, T.**, Waters, M. (2020) On the origin of coexisting species. *Trends in Ecology & Evolution*, 36, 284–283.

6. Miller, T.E.X., Angert, A.L.A., Brown, C.D., Lee-Yaw, J.A., Lewis, M., Lutscher, F., Marculis, N.G., Melbourne, B.A., Shaw, A.K., Szűcs, M., Tabares, O., **Usui, T.**, Weiss-Lehman, C., Williams, J.L. (2020) Eco-evolutionary dynamics of range expansion. *Ecology*, 101, e03139. doi: 10.1002/ecy.3139

5. Baur, J., Laurentino, T.G., **Usui, T.**, Eichhorn M. (2019) Liana abundance and relationships to sapling and tree hosts in an East African primary forest. *African Journal of Ecology*, 57, 130–136. doi: 10.1111/aje.12584
4. **Usui, T.** & Angert, A.L.A. (2018) *Species Ranges*. Elsevier Reference Module in Life Sciences. doi: 10.1016/B978-0-12-809633-8.90400-X
3. **Usui, T.**, Noble, D.W.A., O'Dea, R.E., Fangmeier, M.L., Lagisz, M., Hesselson, D. & Nakagawa, S. (2018) The French Press: a repeatable and high-throughput approach to exercising zebrafish (*Danio rerio*). *PeerJ*, e4292. doi: 10.7717/peerj.4292
2. Fangmeier, M., Noble, D.W.A., O'Dea, R.E., **Usui, T.**, Lagisz, M., Hesselson, D. & Nakagawa, S. (2018) Computer animation technology in behavioral sciences: a sequential, automatic, and high-throughput approach to quantifying personality in zebrafish (*Danio rerio*). *Zebrafish*, 15, 206–210. doi: 10.1089/zeb.2017.1532
1. **Usui, T.**, Butchart, S.H.M. & Phillimore, A.B. (2017) Temporal shifts and temperature sensitivity of avian spring migration phenology: a phylogenetic meta-analysis. *Journal of Animal Ecology*, 86, 250–261. doi: 10.1111/1365-2656.12612

SCHOLARSHIPS & GRANTS

2021	President's Academic Excellence Initiative PhD Award, UBC (\$1030 CAD)
2021	Faculty of Science Graduate Award, UBC (\$100 CAD)
2021	ASN Student Research Award, American Society of Naturalists (\$2000 USD)
2020	President's Academic Excellence Initiative PhD Award, UBC (\$1000 CAD)
2019	GREG Lewontin Award, Society for the Study of Evolution (\$2000 USD)
2018	Vladimir J Krajina Prize in Plant Ecology, Department of Botany, UBC (\$2000 CAD)
2017	International Doctoral Fellowship, UBC (\$138,000 CAD; Accepted)
2017	Scientia PhD Scholarship, University of New South Wales (\$200,000 AUD; Declined)
2017	Graduate Research Scholarship, University College London (£52,660 GBP; Declined)
2017	Overseas Research Scholarship, University College London (£78,480 GBP; Declined)
2017	NERC Science and Solutions for a Changing Planet Doctoral Training Partnership (SSCP DTP), Imperial College London (£62,935 GBP; Declined)

- 2015 Ashworth Medal and Prize 2015 for highest grade in Evolutionary Biology Honours, University of Edinburgh (£250 GBP)
- 2015 Institute of Evolutionary Biology Undergraduate Summer Studentship, University of Edinburgh (£2500 GBP)
- 2015 Travel Bursary for National Biodiversity Network Conference 2015, Institute of Evolutionary Biology, University of Edinburgh
- 2015 Travel Grant, British Ecological Society (£400 GBP)

PRESENTATIONS & WORKING GROUPS

Metascience Conference, Centre for Open Science | 2021

Invited Talk: How can we embrace heterogeneity to improve replicability? (Invited panellist as part of a global symposium on scientific replicability)

Botany & Zoology Conference, UBC | 2021

Contributed Talk: Range expansion across ecological gradients (Best Talk Award)

Coexistence Across Evolutionary Scales, UBC | 2019

Working Group Member, PI: Rachel Germain

Blackendale Ecology & Evolution Retreat, BC | 2019

Contributed Talk: Eco-evolutionary Dynamics of Range Expansions

Blackendale Ecology & Evolution Retreat, BC | 2018

Contributed Poster: The Role of Evolution in Predicting Range Expansion Across Spatially Heterogeneous Landscapes (Best Poster Award)

Eco-evolutionary Dynamics of Range Expansion, UBC | 2018

Working Group Member, PI: Tom Miller and Jennifer Williams

Blackendale Ecology & Evolution Retreat, BC | 2017

Contributed Poster: Are Range-Edge Populations Maladapted? A Synthesis of Transplant Experiments

TEACHING & MENTORING

Teaching Assistant | 2020 – current

BIOL121: Genetics, Ecology & Evolution

BIOL300: Biostatistics

BIOL336: Fundamentals in Evolutionary Biology (2021 Lead/Coordinating TA)

BIOL406: Plant Ecology, University of British Columbia

Undergraduate Mentorship | 2018 – current

Graydon Gillies (NSERC Undergraduate Student Research Award, 2020 & 2021)

Chris Spangenberg (Work–learn research experience, 2020)

Hafsa Ahmed (Work–learn research experience, 2019)

Emma Menchions (Work–learn research experience, 2018)

SERVICE & OUTREACH

Peer Reviewer for: American Journal of Botany, Ecography, Evolution, Global Change Biology, Journal of Animal Ecology, Journal of Avian Biology

Memberships: American Naturalist Society; Botanical Society of America; Canadian Society for Ecology & Evolution; National Biodiversity Network; Society for the Study of Evolution; Tropical Biology Association

Conference Planning Committee, Canadian Society for Ecology & Evolution | 2021

Graduate Student Representative, Biodiversity Postdoctoral Fellowship Search, UBC | 2020

Selection Committee, Annual Evolution Lecture, UBC | 2020

Co-director, Annual Zoology/Botany Huts Skit & Show, UBC | 2019

Symposium Organizer and Host, Annual Evolution Lecture, UBC | 2019

Member, STEM Culture, UBC. A cross-departmental action group on STEM issues | 2018

Member, People & Planet, University of Edinburgh. An environmental discussion & action group | 2015

Volunteer, Navdanya Biodiversity Conservation Farm. A sustainable farming initiative | 2014

President, Tibet Society, University of Edinburgh | 2013

RESEARCH POSITIONS

Interdisciplinary Ecology and Evolution Lab, University of New South Wales | 2016 – 2017

Research Studentship

Executed a meta-analysis on replicability, zebrafish lab experiments, and zebrafish husbandry.

Hadfield Group, University of Edinburgh | 2015 – 2016

Field Assistant

Collected demography and DNA data on blue-tit populations. Supervised field assistants.

Phillimore Group, University of Edinburgh | 2015 – 2016

Research Studentship

Conducted a phylogenetic meta-analysis on changes in spring migratory phenology of birds.

Tropical Biology Association, Kibale National Park, Uganda | 2015

Field Researcher

Conducted field surveys on tropical trees and lianas.

REFERENCES

Dr. Amy Angert (PhD Supervisor)

Departments of Botany and Zoology

University of British Columbia

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Dr. Rachel Germain (PhD Committee Member)

Department of Zoology

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Dr. Jennifer Williams (Collaborator)

Department of Geography

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