Leo Zeitler

University of Fribourg
Department of Biology
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Education

PhD Candidate Population Genomics 10/2020–current
Institute of Plant Sciences, University of Bern, Switzerland
Department of Biology, University of Fribourg, Switzerland
Advisors: Dr. Kimberly Gilbert & Prof. Christian Parisod

M.Sc. Crop Sciences 09/2016–03/2019
University of Hohenheim, Stuttgart, Germany
Thesis: Loss of genetic diversity in doubled-haploid lines from European maize landraces
Advisors: Prof. Jeffrey Ross-Ibarra, Dr. Markus Stetter & Prof. Karl Schmid

B.Sc. Agricultural Sciences 04/2013–11/2016
University of Hohenheim, Stuttgart, Germany
Thesis: Sequence analysis of putative domestication genes in Amaranth
Advisors: Prof. Karl Schmid

High School/Abitur 2003–2011
Johannes Kepler Gymnasium, Stuttgart

Work Experience

Research internship 04/2019–10/2020
Bomblies Lab, Plant Evolutionary Genetics, Institute for Molecular Plant Biology, Department of Biology, ETH Zurich — Zurich, Switzerland

Research internship 04/2018–10/2018
Ross-Ibarra Lab, Department of Plant Sciences and Center for Population Biology, University of California Davis — Davis, CA, USA

Research assistant 09/2015–03/2018
Institute of Plant Breeding, Seed Science and Population Genetics, University of Hohenheim — Stuttgart, Germany

Internship – Plant Breeding 08/2017–10/2017
Betaseed Inc. (KWS) — Kimberly, ID, USA

Internship – Plant Breeding 06/2014–10/2014
PZO Oberlimpurg — Schwäbisch Hall, Germany

Publications

4. **Zeitler, L.**, Parisod, C., and Gilbert, K.J. (2023). Purging due to self-fertilization does not prevent accumulation of expansion load. PLOS Genetics 19, e1010883. DOI:10.1371/journal.pgen.1010883
3. Weitz, A.P., Dukic, M., **Zeitler, L.**, and Bomblies, K. (2021). Male meiotic recombination rate varies with seasonal temperature fluctuations in wild popu-

lations of autotetraploid Arabidopsis arenosa. Molecular Ecology 30, 46304641. DOI:10.1111/mec.16084

2. **Zeitler, L.**, Ross-Ibarra, J., and Stetter, M.G. (2020). Selective Loss of Diversity in Doubled-Haploid Lines from European Maize Landraces. G3: Genes, Genomes, Genetics 10, 2497-2506. DOI:10.1534/g3.120.401196
1. Stetter, M.G., **Zeitler, L.**, Steinhaus, A., Kroener, K., Biljecki, M., and Schmid, K.J. (2016). Crossing Methods and Cultivation Conditions for Rapid Production of Segregating Populations in Three Grain Amaranth Species. Front. Plant Sci. 7. DOI:10.3389/fpls.2016.00816

Grants & Awards

KWS Master Scholarship (2016-2018)

Herzog Carl Scholarship (2018)

Travel grant from Baden-Württembergische Ministerium für Wissenschaft, Forschung und Kunst (2018)

3rd Poster Prize at ELLS Student Conference, Wageningen (2018)

Best student research group project of the Agricultural Faculty, 4. Humboldt reloaded-Jahrestagung (2015)

Conference Presentations

Biology24 — Zürich, Switzerland January 18-19, 2024
What can we learn from Runs of Homozygosity: Distinguishing sources of inbreeding with machine learning and runs of homozygosity — Talk

Computational Phylogenetics Group — Lausanne, Switzerland January 10, 2024
Distinguishing sources of inbreeding with machine learning and runs of homozygosity — Talk

Trilab, University of Bern — Bern, Switzerland June 20, 2023
Distinguishing inbreeding causes with machine learning and runs of homozygosity — Talk

Biology23 — Geneva, Switzerland February 16-17, 2023
Genetic purging due to self-fertilization does not prevent accumulation of expansion load — Talk

Department of Biology Seminar — Fribourg, Switzerland December 15, 2022
Expansion load during a shift in mating system — Talk

ESEB 2022 — Prague, Czech Republic August 14-19, 2022
Shifts to selfing during range expansion cannot overcome the accumulation of genetic load — Talk

Trilab, University of Bern — Bern, Switzerland June 27, 2022
Interaction of demography and mating system change during range expansion — Talk

61st Annual Maize Genetics Conference — St. Louis, MO, USA March 14-17, 2019
Loss of genetic diversity in doubled-haploid lines from European maize landraces — Poster

10th ELLS Scientific Student Conference — Wageningen, Netherlands November 9-10, 2018

Loss of diversity in doubled-haploid lines from European maize landraces — Poster Presentation

Volunteer

Peer Review: Evolutionary Applications

Interest & Skills

Genetics
population genetics (genetic diversity, demographic inference, adaptation), quantitative genetics (GWAS, mixed models)

Bioinformatics
Statistical analysis (R, SAS), python, population genetics and bioinformatics analysis, simulations using SLiM, bash scripting, cluster computing (slurm, LSF), galaxy, workflow management (snakemake), machine learning, LaTeX, emacs, MacOS, GNU/Linux

Wet-Lab
DNA extraction, plant cultivation

Languages

German · Mother tongue
English · Advanced

References

Dr. Kimberly Gilbert · kimberly.gilbert@unifr.ch
Prof. Christian Parisod · christian.parisod@unifr.ch
Prof. Jeffrey Ross-Ibarra · rossibarra@ucdavis.edu