

# Thomas Wolfe | Curriculum Vitae

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*"Change is the only constant" - Heraclitus of Ephesus*

## Education

<b>Boku</b> <i>Postdoctoral Fellow</i>	<b>Austria</b> 2019–Present
<b>University of Vienna / Vienna Graduate School of Population Genetics</b> <i>Ph.D. in Evolutionary Genomics</i>	<b>Austria</b> 2015–2019
<b>University of Lausanne</b> <i>Master in Molecular Life Sciences</i>	<b>Switzerland</b> 2014–2015
<b>University of Lausanne</b> <i>Bachelor in Biology</i>	<b>Switzerland</b> 2010–2014
<b>EPFL</b> <i>First year Mathematics</i>	<b>Switzerland</b> 2008–2010

## Post Doctoral Project

**Working Title:** Horizontal *Wolbachia* Transfers in an Invasive Cherry Fruit Fly.

**Associates:** Ass. Prof. Hannes Schuler, Prof. Christian Stauffer.

**Description:** This project explores the relevance of *Wolbachia* horizontal transfers for the invasive potential of a cherry fruit fly pest species. We are using state-of-the-art NGS Nanopore and Illumina sequencing to address these problems.

## Doctoral Project

**Title:** *Dactylorhiza* Allopolyploidization, from Ecological Differentiation to Molecular Evolution.

**Supervisors:** Ass. Prof. Ovidiu Paun, Ass. Prof. Claus Vogl, and Prof. Christian Lexer.

**Description:** This project explores the ecological relevance of polyploidy in natural wild Orchid populations. We are using state-of-the-art transcriptomics (RNA-seq) data to assess these questions.

## Masters Thesis

**Title:** *The long term effect of polyploidisation on transposable element activity.*

**Supervisors:** Prof. Marc Robinson-Rechavi and Dr. Sacha Laurent.

**Description:** This thesis explored the idea that transposable element activity could be higher in polyploids.

## Publications

**Wolfe, Thomas M.**, D. J. Bruzzese, L. Klasson, E. Corretto, S. Lečić, C. Stauffer, J. L. Feder, and H. Schuler. Comparative genome sequencing reveals insights into the dynamics of *wolbachia* in native and invasive cherry fruit flies. *Molecular Ecology* **special issue: The use of whole-genome sequences in molecular ecology** (2021). arXiv:<https://onlinelibrary.wiley.com/doi/pdf/10.1111/mec.15923>.

**Wolfe, Thomas M.**, F. Balao, E. Trucchi, M. T. Lorenzo, J. Baar, M. Hedrén, G. Bachmann, W. Weckwerth, and O. Paun. Macro- and microevolutionary drivers of divergent evolution in two sibling allopolyploid

*Dactylorhiza*. Advanced draft intended for Nature Plant (2019).

**Wolfe, Thomas M.**, M. Pontz, J. Baar, C. Vogl, C. Lexer, and O. Paun. Patterns of homoeolog biases and expression level dominance and their evolutionary implication between two sibling polyploid orchids. draft and results. *Advanced draft intended for Molecular Biology and Evolution* (2019).

F. Balao, E. Trucchi, **Wolfe, Thomas M.**, B.-H. Hao, M. T. Lorenzo, J. Baar, L. Sedman, C. Kosiol, F. Amman, M. W. Chase, et al. Adaptive sequence evolution is driven by biotic stress in a pair of orchid species (*Dactylorhiza*) with distinct ecological optima. *Molecular Ecology* **26**, 3649–3662 (2017).

## Computer Skills

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**GitHub:** [www.github.com/twolfe](https://www.github.com/twolfe)

**Advanced:** R, Bash, Python, Awk, Markdown, L<sup>A</sup>T<sub>E</sub>X

**Intermediate:** C/C++, Julia, particular interest in GoLang

**Basic:** Lisp

## Applied Skills

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**Genomics:** Genome assemblies, Nanopore, PacBio, Illumina, transcriptomics

**Laboratory:** RNA sequencing, RT-PCR, whole genome amplification, cell culture and transformations, DAPI and GFP, confocal microscopy, flow cytometry

**Theoretical and Modeling:** Parametric testing and non-parametric testing, causal inference, diffusion theory, fluctuating selection, population structure and selection, quantitative genetics

## Communication Skills

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**2021-Jun:** Oral Presentation at CNIE - Turin, Italy (online)

**2021-Mai:** Oral Presentation at Symbiosis Meeting - Emory, USA (online)

**2021-Mai:** Oral Presentation at Dobby Meeting - LMU, Germany (online)

**2021-Jan:** Oral Presentation at PopGroup - Liverpool, UK (online)

**2019-Mai:** Oral Presentation at IST - Klosterneuburg, Austria

**2018-Sep:** Oral Presentation at GFÖ - Vienna, Austria

**2018-Aug:** Poster at II Joint Congress on Evolutionary Biology - Montpellier, France

**2017-Oct:** Poster at Plant Genome Evolution - Barcelona, Spain

**2017-Sep:** Poster at Plant Epigenetics - Vienna, Austria

**2017-Jun:** Oral Presentation at Botany - Fort Worth, Texas

**2017-Jan:** Oral Presentation at PopGroup - Cambridge, UK

**2016-Mai:** Oral Presentation at the International Conference on Polyploidy - Rovinj, Croatia

## Teaching

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**Vienna Graduate School of Population Genetics**

**Austria**

*Experimental evolution: From theory to practice*

November 6-10, 2017

Assisted student with exercises.

**University of Vienna**

**Austria**

*300369 UE Genomic approaches to variation and adaptation*

2017

Transcriptomics and assistance with exercises.

## Courses and workshops

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**2016-Dec:** Inferring Natural Selection using Genomic Data - Ferrara, Italy

**2015-Aug:** Genetic data analysis in R - Glasgow, Scotland

## Experience

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Miscellaneous.....

### JOWA

*Baker, Ecublens*

This factory produces bread for the largest swiss supermarket . Night shifts in industry.

**Switzerland**

*2014–2015*

### Globus

*Security guard, Lausanne*

I was employed to make sure no items would leave the shop without having been paid. This work involved some diplomacy.

**Switzerland**

*2010–2011*

### Manor

*Logistics, Lausanne*

My work was to load and unload the merchandise coming in and going out of the store. Responsible for bringing merchandise to the five floors of the shop.

**Switzerland**

*2006–2008*

### Various

*Watch mechanic*

Many monthly work experiences in the fields of the watch industry and mechanics. These were done to sensitize young people to there interests for later apprenticeships.

**Switzerland**

*2002–2004*

## Languages

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**English:** Mothertongue

*Father's language*

**French:** Mothertongue

*Mother's language*

**German:** Intermediate

*Daily usage*

**Italian:** Intermediate

*Learned at school*

**Serbian:** Basic

*Basic words and phrases*

## Interests

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- Clarinet/Saxophone

- Music

- Chess

- Reading

- Traveling

- Rugby