Curriculum Vitae

Personal Information

Raphaël Scherrer, MSc
PhD candidate in Theoretical Evolutionary Biology at the University of Groningen

Email: raphael.scherrer@evobio.eu
GitHub: https://github.com/rscherrer
ORCiD: https://orcid.org/0000-0002-1447-7630
ResearchGate: https://researchgate.net/profile/Raphael-Scherrer
Linkedin: https://www.linkedin.com/in/rapha%C3%ABl-scherrer-5817a3bb/

Professional Experience

08/2023–08/2024 **Scientific Programmer**
Groningen Institute for Evolutionary Life Sciences
University of Groningen, the Netherlands

03/2023–08/2023 **University Lecturer**
University of Groningen, the Netherlands

11/2017–02/2022 **PhD Scholarship Student**
Adaptive Life Program
University of Groningen, the Netherlands

Education

11/2017–now **PhD in Theoretical Evolutionary Biology**
Adaptive Life PhD Scholarship Program

- University of Groningen, the Netherlands
  Dissertation: *The genomic architecture of adaptive speciation.* Supervised by Prof. Rampal S. Etienne & Prof. G. Sander van Doorn, Department of Theoretical Research, Groningen Institute for Evolutionary Life Sciences (GELIFES).

09/2015–08/2017 **MSc in Evolutionary Biology**
Mobility and Excellence Master in Evolutionary Biology (MEME)
https://evobio.eu

- Uppsala University, Sweden (thesis, passed)
  Thesis: *Sexual selection and the rapid evolution of plumage coloration upon speciation: a study of birds of paradise (Paradisaeidae).* Supervised by Dr. Melanie J. Monroe, Department of Evolutionary Biology.

- Harvard University, Cambridge, MA, USA (GPA 4/4)
  Thesis: *Adaptive divergence of a sexual trait in a Caribbean lizard.* Supervised by Dr. Anthony J. Geneva, Dr. Colin M. Donihue & Prof. Jonathan B. Losos, Department of Organismic and Evolutionary Biology.
- Ludwig Maximilian University, Munich, Germany (GPA 3.9/4)
  Project work: *Gene expression divergence between populations and sexes in Drosophila melanogaster.* Supervised by Prof. John Parsch, Department of Evolutionary Biology.
- University of Groningen, the Netherlands (GPA 4/4)
  Project work: *Tree imbalance under the Protracted Birth Death model of speciation.* Supervised by Prof. Rampal S. Etienne, Groningen Institute for Evolutionary Life Sciences (GELIFES).

09/2014–08/2015 **MSc in Ecology and Evolution** (First year)
Master Biologie Évolutive et Écologie

- University of Montpellier, France (GPA 3.83/4)
  Project work: *Skeletal development and evolution of developmental genes in the Cuban gar (Atractosteus tristoechus).* In French. Supervised by Dr. Melanie Debiais-Thibaud, Montpellier Institute for Evolutionary Sciences (ISEM).

09/2011–08/2014 **BSc in Biology**
University of Lorraine, Nancy, France (GPA 3.92/4)
Graduated *summa cum laude* (Mention Très Bien)

07/2011 **Scientific Baccalauréat**
Lycée Louis Majorelle, Toul, France
Graduated *summa cum laude* (Mention Très Bien)

Peer Reviewed Publications

Scherrer, R., Donihue, C. M., Reynolds, R. G., Losos, J. B., & Geneva, A. J. (2022). Dewlap colour variation in *Anolis sagrei* is maintained among habitats within islands of the West Indies. *Journal of Evolutionary Biology*, 35(5), 680–692. https://doi.org/10.1111/jeb.14002

Simonet, C., **Scherrer, R.**, Rego-Costa, A., & Etienne, R. S. (2018). Robustness of the approximate likelihood of the protracted speciation model. *Journal of Evolutionary Biology*, 31(3), 469–479. https://doi.org/10.1111/jeb.13233

Scherrer, R., Hurtado, A., Garcia Machado, E., & Debiais-Thibaud, M. (2017). MicroCT survey of larval skeletal mineralization in the Cuban gar *Atractosteus tristoechus* (Actinopterygii; Lepisosteiformes). *MorphoMuseuM*, 3(3), e3. https://doi.org/10.18563/m3.3.3.e3

Ongoing Work

Scherrer, R., Dieckmann, U., Etienne, R. S. & van Doorn, G. S. Epistasis and the genomic architecture of adaptive speciation with gene flow. In *The genomic architecture of adaptive speciation* (Doctoral dissertation in prep.). University of Groningen, the Netherlands.

Scherrer, R., Korte, M., Smit, C., van Doorn, G. S. & Etienne, R. S. Ecological facilitation hinders adpatation to climate change in a semi-arid environment. In *The genomic architecture of adaptive speciation* (Doctoral dissertation in prep.). University of Groningen, the Netherlands.

Scherrer, R., Damhuis, J., van Doorn, G. S. & Etienne, R. S. Diversification of ecological specialists under optimal resource choice. In *The genomic architecture of adaptive speciation* (Doctoral dissertation in prep.). University of Groningen, the Netherlands.

Scherrer, R., Janzen, T. & Etienne, R. S. Protracted speciation explains phylogenetic imbalance and slowdowns in lineage accumulation, but not both at the same time. In *The genomic architecture of adaptive speciation* (Doctoral dissertation in prep.). University of Groningen, the Netherlands.

Scherrer, R., Delhey, K., Johansson, U., Etienne, R. S. & Monroe, M. J. Rapid divergence of plumage coloration upon speciation in birds-of-paradise. In *The genomic architecture of adaptive speciation* (Doctoral dissertation in prep.). University of Groningen, the Netherlands.

Bravo, H., **Scherrer, R.**, Xu, T., Scholten, Y., Santos Neves, P., Guérin, C., Borgstein, N. & van der Meij, S. E. T. (2024). Evaluating robustness of a Caribbean coral-symbiont fauna network in a changing climate. In *On the symbiosis of species in coral reefs* (Doctoral dissertation). University of Groningen, the Netherlands. https://doi.org/10.33612/diss.993901641

Ruiz Puerta, E. J., **Scherrer, R.**, Cabrera, A. A., McCarthy, M. L., En Pan, S., Howse, L. R., Szpak, P., Keighley, X., Pálsson, S., Rufolo, S., Malmquist, H. J., Gotfredsen, A. B., Cory, M. J. D., Desjardins, S. P. A., Jordan, P. D. & Tange Olsen, M. (2024). Ancient DNA reveals 5000 years of male-biased walrus hunting across the Atlantic Arctic. In *The use of ancient genomes to unveil the evolutionary history and social implications of Atlantic walruses hunting during the last 5000 years in the Arctic* (Doctoral dissertation). University of Groningen, the Netherlands. https://doi.org/10.33612/diss.1073769863

Riederer, J. M., **Scherrer, R.**, van der Vaart, C., Favot, R., Kreider, J., Mahler, L., Kolbe, J., Komdeur, J. & Weissing, F. J. Sexual selection and evolvability in *Anolis* lizards. In *Evolvability and sexual selection: how social interactions shape the ability to evolve* (Doctoral dissertation in prep.). University of Groningen, the Netherlands.

van der Meij, S., Bravo, H., Borgstein, N., Scholten, Y., **Scherrer R.**, & Xu T. Caribbean coral-dwelling fauna: literature overview and new records (Manuscript in prep.).

Software Contributions

Etienne, R. S., Valente, L., Phillimore, A. B., Haegeman, B., Lambert, J. W., Santos Neves, P., Xie S., Bilderbeek, R. J. C., Hildenbrandt, H., Hauffe, T., Laudanno, G., Kristensen, N. & **Scherrer, R** (2025). DAISIE: Dynamic Assembly of Island biota through Speciation, Immigration and Extinction. *The Comprehensive R Archive Network* (CRAN).
https://doi.org/10.32614/CRAN.package.DAISIE

Conferences

2022 **Conference talk:** Epistasis makes ecological speciation be driven by a speciation genome, not by speciation genes. Junior meeting of the Dutch Society for Evolutionary Biology (NLSEB), Groningen, the Netherlands.

2021 **Conference talk:** The genomic signatures of speciation with gene networks. Modelling in Ecology and Evolution Meeting (MEEM), Lausanne, Switzerland — online.

2021 **Conference talk:** Modeling speciation with gene networks. Meeting of the Dutch Society for Theoretical Biology (NVTB), Schoorl, the Netherlands — online.

2021 **Attendence:** Evolution conference (ASN/SSB/SSE) — online.

2021 **Attendence:** Meeting of the Society for Open, Reliable and Transparent Ecology and Evolutionary Biology (SORTEE) — online.

2021 **Attendence:** Meeting of the Dutch Society for Evolutionary Biology (NLSEB) — online.

2021 **Pitch contest:** Gene networks and speciation. PhD/Postdoc meeting of the Dutch Society for Evolutionary Biology (NLSEB) — online.

2019 **Attendence:** PhD Day, University of Groningen, the Netherlands.

2019 **Attendence:** Evolution Evolving conference, Cambridge, United Kingdom.

2018 **Poster:** Cladogenetic evolution of plumage coloration in birds of paradise. Evolution conference (ASN/SSB/SSE/ESEB), Montpellier, France.

2018 **Poster:** Sexual selection plays a limited role in accelerating color evolution upon speciation in birds of paradise. Meeting of the Dutch Society for Evolutionary Biology (NLSEB), Ede, the Netherlands.

2017 **Poster:** Adaptive divergence of dewlap coloration in *Anolis sagrei*. Meeting of the European Society for Evoutionary Biology (ESEB), Groningen, the Netherlands.

Teaching

University of Groningen (the Netherlands)

2023–2024 **Lecturer & Course coordinator:** Evolutionary Processes (BSc).

2023 **Lecturer:** Programming in C++ for biologists (BSc, MSc).

2023 **Content creator:** Evolutionary Theory (MSc).

2020–2022 **Teaching assistant:** Evolutionary Processes (BSc).

2020–2021 **Teaching assistant:** Behaviour, Ecology and Evolution (MSc).

2020 **Co-creator, Lecturer & Coordinator:** Advanced data manipulation using R and the tidyverse — tutorial for theoretical biologists (PhD). https://github.com/pratikunterwegs/tres-tidy-tutorial

2019–2020 **Teaching assistant:** Programming in C++ for biologists (BSc, MSc).

Supervision

University of Groningen (the Netherlands)

2020 **Supervision of MSc thesis:** Vasiliki (Celia) Tsapalou (MSc Ecology and Evolution). Inferring the Additive and Epistatic Genetic Architecture involved in Speciation Using Neural Networks.

2020 **Supervision of MSc essay:** Sebastian Mader (MSc Ecology and Evolution). Machine learning vs. "classical" statistics – A redundant but understandable differentiation.

2020 **Grading of MSc essay:** Israel Campo Bes (MSc in Ecology and Evolution). On the Origin of Genetic Dominance by Means of Natural Selection?

2020 **Supervision of BSc project:** Elsie Tata & Robin Hamberg. Detecting speciation genetic architectures. Course: Modelling in the Life Sciences Research.

2019 **Supervision of MSc thesis:** Joris Damhuis (MSc Ecology and Evolution). Optimal choice and speciation.

2019 **Supervision of MSc mini-project:** Reinier de Vries. Generating a phylogenetic tree from a distance matrix using UPGMA and NJ. Course: Programming in C++ for biologists.

2019 **Supervision of BSc project:** Jelle Molenkamp & Nicolette Tataru. The evolution of gene regulatory networks. Course: Modelling in the Life Sciences Research.

2018 **Supervision of BSc project:** Rik Nienhuis & Bob Evenhuis. The effect of resource limitation and asymmetric competition on insular dwarfism and gigantism. Course: Community Ecology Research.

Peer Review

Journal of Morphology — Oikos — Nature Communications Biology

Outreach

2025–2023 **Voluntary lecturer & Co-organizer** of the Crash Course in Evolutionary Biology, a free online course aimed at students from the Global South. https://evobiocrashcourse.github.io/

2019 **Participant** in Bavardages Évolutifs, a public "speed-dating" session (in French) between scientists and the public, aimed at promoting dialogue and interest in evolutionary biology. Organized as part of the 2019 Evolution conference in Montpellier, France.

2019 **Podcast episode:** The MEME Stream, a science podcast by students and alumni of the Mobility and Excellence Master in Evolutionary Biology (MEME). Episode 2: The tempo of evolution and the birds-of-paradise with Raphaël Scherrer. https://open.spotify.com/episode/4lsaLONEsJtfeOObHPltq5.

2018 **Outreach talk:** Cladogenetic evolution of plumage coloration in birds of paradise. Outreach seminar series in honor of writer Redmond O'Hanlon, Groningen Institute for Evolutionary Life Sciences (GELIFES), Groningen, the Netherlands.

Volunteering

03/2017 **Field assistant:** Capture of wild brown anoles (*Anolis sagrei*) from the Bahamas for an experimental lizard colony at Harvard University. Supervised by Dr. Colin M. Donihue & Prof. Jonathan B. Losos, Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA, USA.

09/2016–02/2017 **Lab assistant:** Maintenance and animal husbandry for an experimental lizard colony at Harvard University. Supervised by Dr. Colin M. Donihue & Dr. Anthony J. Geneva, Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA, USA.

07/2014–08/2014 **Voluntary internship:** Maintenance and measurements in a mesocosm phytosanitary experiment in ecotoxicology. Supervised by Dr. Marielle Thomas, Research Unit on Animals and Functionality of Animal Products, University of Lorraine, Nancy, France.

07/2013–08/2013 **Voluntary internship:** Behavioral observation and cognition experiments in a social network of captive rooks (*Corvus frugilegus*). Supervised by Dr. Valérie Dufour, Department of Ecophysiology and Ethology, National Center for Scientific Research (CNRS), Strasbourg, France.

2013 **Voluntary participation:** Inventory of the zoological collection of the Faculty of Sciences and Technology. Supervised by Dr. Dominique Chardard, University of Lorraine, Nancy, France.

Notable Skills

Proficient in C++, R, Python, MATLAB, Mathematica, LaTeX, and experience working with high-performance computer clusters (HPC).

Programming according to the test-driven development philosophy.

Speaking native French, fluent English (C2), advanced Spanish (C1) and basic Dutch (A1).

Public speaking and improv comedy (Student Cultural Center USVA, Groningen 2024–2025).

Managing life with type I diabetes since 2013.

Compiled on May 5, 2025