Curriculum Vitae

Personal Information

Raphaël Scherrer, MSc
PhD candidate at the University of Groningen
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Birth date: 12 May 1994
Place of birth: Toul, France
Nationality: French

Education

11/2017–now **PhD Theoretical Biology**
Department of Theoretical Research in Evolutionary Life Sciences
Groningen Institute for Evolutionary Life Sciences
University of Groningen, Groningen, the Netherlands
Title: The genomic architecture of adaptive speciation
Supervised by Prof. Rampal S. Etienne & Prof. G. Sander van Doorn

09/2015–08/2017 **MSc Evolutionary Biology**
Erasmus Mundus Master's in Evolutionary Biology (https://evobio.eu)
University of Groningen, Groningen, the Netherlands (GPA 4/4)
Ludwig Maximilian University, Munich, Germany (3.9/4)
Harvard University, Cambridge, MA, USA (thesis)
Uppsala University, Uppsala, Sweden (thesis)

09/2014–08/2015 **MSc Ecology and Evolution**
First year
University of Montpellier, Montpellier, France (GPA 3.83/4)

09/2011–08/2014 **BSc 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)

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

Other Research

03/2017–08-2017 **MSc thesis:** Sexual selection and the rapid evolution of plumage coloration upon speciation: a study of birds of paradise (Paradisaeidae).
Department of Evolutionary Biology, Uppsala University, Uppsala, Sweden. Supervised by Dr. Melanie J. Monroe.

09/2016–02/2017 **MSc thesis:** Adaptive divergence of a sexual trait in a Caribbean lizard.
Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA, USA. Supervised by Dr. Anthony J. Geneva, Dr. Colin M. Donihue & Prof. Jonathan B. Losos.

03/2016–08/2016 **MSc project:** Gene expression divergence between populations and sexes in *Drosophila melanogaster*.
Department of Evolutionary Biology, Ludwig Maximilian University, Munich, Germany. Supervised by Prof. John Parsch.

11/2015–12/2015 **MSc project:** Tree imbalance under the Protracted Birth Death model of speciation.
Department of Theoretical Research in Evolutionary Life Sciences, Groningen Institute for Evolutionary Life Sciences, University of Groningen, Groningen, the Netherlands. Supervised by Prof. Rampal S. Etienne.

06/2015–08/2015 **MSc project:** Skeletal development and evolution of developmental genes in the Cuban gar (*Atractosteus tristoechus*). In French.
Institut des Sciences de l'Evolution de Montpellier, University of Montpellier, Montpellier, France. Supervised by Dr. Melanie Debiais-Thibaud.

Conferences

2022 **Conference talk:** Epistasis makes ecological speciation be driven by a speciation genome, not by speciation genes. 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.

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

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

2023–now **Lecturer:** Currently teaching and coordinating the course Evolutionary Processes (BSc) and restructuring the course Evolutionary Theory (MSc).

2020–2022 **Teaching assistant:** Evolutionary Processes (BSc).
Computer practicals on speciation theory.

2020–2021 **Teaching assistant:** Behaviour, Ecology and Evolution (MSc).
Practicals on the concept of fitness.

2019–2020 **Teaching assistant:** Programming in C++ for biologists (BSc, MSc, PhD).
Practicals and one lecture.

2020 **Tutorial:** Advanced data manipulation using R and the tidyverse (co-created and hosted). https://github.com/pratikunterwegs/tres-tidy-tutorial

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 and 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 and Nicolette Tataru. The evolution of gene regulatory networks. Course: Modelling in the Life Sciences Research.

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

Peer Review

2022 Review for *Nature Communications Biology*

2021 Review for *Oikos*

2018 Review for *Oikos*

2017 Co-review for *Journal of Morphology* (as a trainee)

Outreach

2023 **Voluntary lecturer** for the upcoming Evolutionary Biology Crash Course, 2023 edition, a free online course aimed at students from the Global South (topics: speciation theory, models of macroevolution, adaptive dynamics).
https://evobiocrashcourse.github.io/

2023 **Participant in the Knowledge Clips** project of the NLSEB, aimed at making topics in evolutionary biology accessible to students across Dutch universities and beyond.

2021 **1-minute elevator pitch contest**, at NLSEB PhD/postdoc meeting, Ede, the Netherlands.

2019 **Podcast episode:** Meme Stream Episode 2: The tempo of evolution and the birds-of-paradise with Raphaël Scherrer.
https://open.spotify.com/episode/4lsaLONEsJtfeOObHPltq5.

2018 **Short 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, 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. Department of Organismic and Evolutionary Biology, Harvard University, Cambridge, MA, USA. Supervised by Dr. Colin M. Donihue and Prof. Jonathan B. Losos.

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

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

07/2013–08/2013 **Internship:** Behavioral observation and cognition experiments in a social network of captive rooks (*Corvus frugilegus*). Department of Ecophysiology and Ethology, Centre National de la Recherche Scientifique (CNRS), Strasbourg, France. Supervised by Dr. Valérie Dufour.

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

Society Memberships

2021 **Member:** Society for the Study of Evolution (SSE).

2021 **Member:** Society for Open, Reliable, and Transparent Ecology and Evolutionary Biology (SORTEE).

2018–2019, 2021 **Member:** Dutch Society for Evolutionary Biology (NLSEB).

2017–2018 **Member:** European Society for Evolutionary Biology (ESEB).

2016–2019 **Member:** American Association for the Advancement of Science (AAAS).

Notable Skills

Coding in C++, R, Python, MATLAB and Mathematica.

I know my way around a high-performance computer cluster.

I program using the test-driven development philosophy.

Writing my papers in LaTeX.

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

Managing my type I diabetes since 2013.

Activities

Salsa dancing — martial arts — landscape and natural history illustration — nature photography — cooking and baking — fossils and minerals — circus arts

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