

# Gil J. B. Henriques

PHD IN MATHEMATICAL EVOLUTIONARY BIOLOGY

Biodiversity Research Centre • University of British Columbia, Vancouver

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*I am a mathematical evolutionary biologist. In my research, I use analytical and numerical modeling, computer simulations, and data analysis. I am proficient in the **R** programming language and familiar with **Mathematica**, **Matlab**, and **C++**. Some of my interests include: evolutionary game theory, science communication and teaching, and data visualization.*

## Education

### PhD in Zoology

UNIVERSITY OF BRITISH COLUMBIA

BC, Canada

2015–21

- **Supervised by Michael Doebeli:** Evolutionary theory of cooperation and group life

### MSc Erasmus Mundus in Evolutionary Biology (*summa cum laude*)

UPPSALA UNIVERSITY & GRONINGEN UNIVERSITY (DUAL DEGREE)

Sweden & Netherlands

2013–15

- **Supervised by Claus Rueffler & Simone Immler (Uppsala):** Recombination and diversification in multidimensional phenotypes
- **Supervised by Ido Pen (Groningen):** Queen-worker conflict and sex ratio adjustment in social insects

### BSc in Biology (Evolutionary and Developmental Biology)

UNIVERSITY OF LISBON

Portugal

2010–13

## Teaching and Outreach

### Teaching experience

#### Workshop coordinator

UNIVERSITY OF BRITISH COLUMBIA • [ECOSCOPE](#) • [EDUCE](#)

BC, Canada

2020–21

- Developing & teaching workshops: Introductory R, Intermediate R, Science Reproducibility, the R tidyverse, Statistical Models in R

#### Graduate Teaching Assistant & Senior Teaching Assistant

UNIVERSITY OF BRITISH COLUMBIA

BC, Canada

2015–20

- Biology Program Graduate Teaching Award (Honorable mention, 2019)
- **BIOL 111** (Intro Biology), **BIOL 121** (Genetics, Ecology and Evolution), **BIOL 234** (Genetics), **BIOL 300** (Biostatistics), **BIOL 301** (Biomathematics), **BIOL 336** (Fundamentals of Evolutionary Biology), **ISCI 320** (Research Development Retreat)
- Responsibilities have included, among others: teaching tutorials and labs, developing curricular material, supervising other TAs, marking

#### Guest Lecturer

UNIVERSITY OF BRITISH COLUMBIA

BC, Canada

2016–18

- **LAW 524** (Methodologies in Law and Policy): two guest lectures on game theory
- **BIOL 121** (Genetics, Ecology, and Evolution): guest lecture on speciation

### Teaching training

- 2019 **Foundations of Pedagogy (FOP):** one-term course about evidence-based teaching. Run by [CIRTL](#)
- 2016 **Instructional Skills Workshop (ISW):** 24h comprehensive instructor development program. Run by [CIRTL](#)
- 2015 **Biology TA Professional Development (BioTAP):** 14h workshop series about practical teaching skills

### Outreach and science communication

- 2020 **Freelance science writer** • Published at [IGSN](#)
- 2016 **3 Minute Thesis competition:** • Finalist at University of British Columbia, Vancouver
- 2015–16 **Beaty Biodiversity Museum:** Museum educator (volunteer)
- 2015–16 **Let's Talk Science:** Teacher Partnership Program (classroom science teaching at Gibson Elementary K-7 school) • Educational activities at the TELUS World of Science Museum

## Other Employment

### Textbook reviewer

MACMILLAN LEARNING

- Reviewed content for the 3rd edition of Whitlock and Schluter's *The Analysis of Biological Data*

BC, Canada

2020

### Survey coordinator

UBC GRADUATE STUDENT SOCIETY

- Responsible for running and analysing the annual Student Satisfaction Survey

BC, Canada

2018–19

### Note taker

UBC CENTRE FOR ACCESSIBILITY

BC, Canada

2018–19

### MSc research intern

UNIVERSITY OF MONTPELLIER

- Supervised by Thomas Lenormand & Yannis Michalakakis:** Maladaptive sex ratio manipulation in *Artemia* brine shrimp

France

2014

### Undergraduate researcher (**Amadeu Dias fellow**)

UNIVERSITY OF LISBON

- Supervised by Francisco Dionisio:** Use of  $\lambda$ -virus as biological weapons by *E. coli*

Portugal

2012–13

## Publications

Preprint	<b>Gil J B Henriques</b> , Simon van Vliet & Michael Doebeli: Multilevel selection favors fragmentation modes that maintain cooperative interactions in multispecies communities.	<b>BioRxiv</b>
2021	<b>Gil J B Henriques</b> , Koichi Ito, Christoph Hauert & Michael Doebeli: On the importance of evolving phenotype distributions on evolutionary diversification.	<b>PLOS Comp. Biol.</b> 17:2 e1008733
2020	<b>Gil J B Henriques</b> & Matthew M Osmond: Cooperation can promote rescue or lead to evolutionary suicide during environmental change. <a href="#">[pdf]</a>	<b>Evolution</b> 74:7 1255–1273
2020	Andrés E Quiñones, <b>Gil J B Henriques</b> , & Ido Pen: Queen-worker conflict can drive the evolution of social polymorphism and split sex ratios in facultatively eusocial life cycles. <a href="#">[pdf]</a> • <a href="#">digest</a>	<b>Evolution</b> 74:1 15–28
2019	<b>Gil J B Henriques</b> , Simon Burton, Yaroslav Ispolatov & Michael Doebeli: Acculturation drives the evolution of intergroup conflict. <a href="#">[pdf]</a> • <a href="#">press</a> • <a href="#">press</a>	<b>PNAS</b> 116:28 14089–14097
2016	Eva J P Lievens, <b>Gil J B Henriques</b> , Yannis Michalakakis & Thomas Lenormand: Maladaptive sex ratio adjustment in the invasive brine shrimp <i>Artemia franciscana</i> . <a href="#">[pdf]</a> • <a href="#">digest</a>	<b>Current Biology</b> 26:11 1463–1467

## Competitive (merit-based) fellowships, scholarships and awards

2019	<b>Zoology Graduate Fellowship:</b> awarded by the Zoology Department at UBC	15,000 CAD
2019	<b>Biology Graduate TA Award:</b> awarded by the Biology Program at UBC	Honorable Mention
2017	<b>Ruth Patrick Student Poster Award:</b> awarded by the American Society of Naturalists	1000 USD
2017	<b>Charles CC Wong &amp; George Shen Fellowships:</b> awarded by St John's College at UBC	4000 CAD
2013–15	<b>MEME Consortium Scholarship:</b> awarded by the European Commission	21,500 EUR
2012–13	<b>Amadeu Dias Fellowship:</b> awarded by the Amadeu Dias Foundation	1900 EUR

## Languages

Coding	<b>R</b> (advanced) • <b>Mathematica</b> (intermediate) • <b>C++</b> (beginner) • <b>Matlab</b> (beginner)
Natural	<b>Portuguese</b> (first language) • <b>English</b> (fluent, C2) • <b>French</b> (intermediate, B1) • <b>Swedish</b> (intermediate, B1) • <b>Spanish</b> (elementary, A2) • <b>Latin</b> (beginner, A1) • <i>Codes indicate CEF reference levels</i>

## Service

2020–21	<b>Peer reviewer</b> for <i>Ecological Complexity</i> , <i>Ecology and Evolution</i> , and <i>PLOS Biology</i>
2018–20	<b>Executive Committee &amp; Bargaining Committee</b> at <a href="#">CUPE 2278</a> , UBC
2016–17	<b>Social Justice Committee co-chair</b> at St John's College, UBC
2011–12	<b>Pedagogic Board alternate member</b> at Faculty of Science, University of Lisbon