

# Gil J. B. Henriques

PHD IN EVOLUTIONARY BIOLOGY

Biodiversity Research Centre • University of British Columbia, Vancouver • Unceded Musqueam territory

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*I am interested in the interplay of evolution and ecology. My current research focuses on the evolution of social behaviours such as cooperation and conflict. Other research topics include sex allocation and biological diversification. I use a theoretical approach (with an emphasis on adaptive dynamics and individual-based simulations), occasionally in combination with empirical work.*

## 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

## Other Research Experience

### MSc research intern

UNIVERSITY OF MONTPELLIER

France

2014

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

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

UNIVERSITY OF LISBON

Portugal

2012–13

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

## 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

## Employment other than Research & Teaching

- 2020 **Textbook reviewer** at **Macmillan Learning**: reviewed video content for the 3rd edition of Whitlock and Schluter's *The Analysis of Biological Data*
- 2018–19 **Survey coordinator** at UBC **Graduate Student Society**: responsible for running and analysing the annual Student Satisfaction Survey
- 2018–19 **Note taker** at UBC **Centre for Accessibility**

## Publications

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

## Conference talks and posters

- 2021 **UBC Botany and Zoology Spring Research Symposium**. Gil J B Henriques, Simon van Vliet, Michael Doebeli: Multilevel selection favors fragmentation modes that maintain cooperative interactions in multispecies communities **Talk** Online
- 2020 **Meeting of the American Society of Naturalists (Asilomar)**. Gil J B Henriques, Simon van Vliet, Michael Doebeli: Multilevel selection favors fragmentation modes that maintain cooperative interactions in multispecies communities **Talk** Online
- 2019 **Mathematical Models in Ecology and Evolution**. Gil J B Henriques, Burton Simon, Yaroslav Ispolatov, Michael Doebeli: Acculturation drives the evolution of intergroup conflict **Talk** Lyon, France
- 2019 **UBC Zoology Grad Student Association Spring Research Symposium**. Gil J B Henriques, Matthew M Osmond: During environmental change, cooperation can promote rescue or lead to evolutionary suicide **Talk** Vancouver, Canada
- 2018 **Eco-Evo Retreat Conference**. Gil J B Henriques, Burton Simon, Yaroslav Ispolatov, Michael Doebeli: Acculturation drives the evolution of intergroup conflict **Poster** Squamish, Canada
- 2017 **Evolution**. Gil J B Henriques, Andrés E Quiñones, Ido Pen: Queen-worker conflict can drive the evolution of social polymorphism and split sex ratios in facultatively eusocial life cycles. **Ruth Patrick Best Poster Award** **Poster** Portland, USA
- 2015 **Eco-Evo Retreat Conference**. Gil J B Henriques, Michael Doebeli: Social evolution in continuous public goods games – Research proposal **Poster** Squamish, Canada
- 2015 **MEME Summer School**. Queen-worker conflict can drive the evolution of social polymorphism and split sex ratios in facultatively eusocial life cycles. **Talk** Munich, Germany
- 2013 **Amadeu Dias Foundation Conference**. Gil J B Henriques, Francisco Dionisio. Use of  $\lambda$ -virus as biological weapons by *E. coli* **Poster** Lisbon, Portugal

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

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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

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Coding	<b>R</b> (advanced) • <b>Mathematica</b> (intermediate) • <b>C++</b> (beginner) • <b>Matlab</b> (beginner) • <b>Python</b> (beginner) • <b>SQL</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

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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