

Curriculum Vitae

Name: Julia Carolina Segami Marzal
Title: PhD
Date of Birth: 13 August 1989
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Education

2007 High-school (Liceo Scientifico/Baccalaureate) Colegio Antonio Raimondi
Lima, Perú

2012 BSc in Biology, Peruvian University Cayetano Heredia, Lima, Perú

2015 MEME master in evolutionary biology, (double diploma) Uppsala University,
Sweden / Ludwig Maximilians University of Munich, Germany

Master thesis 1: "Mate choice and hybrid viability in two species of *Heliconius*" Co-supervised by Dr. James Mallet, Harvard University and Dr. John Parsch, Ludwig Maximilians University of Munich.

Master thesis 2: "Cryptic females experience higher predation risk when associating with an aposematic partner in poison dart frogs" Supervised by Dr. Anna Qvarnström, Uppsala University.

2022 PhD in Biology, Department of Ecology and Genetics / Animal
Ecology, EBC, Uppsala University, Sweden

Dissertation: "Hybrid sterility and genetic incompatibilities in *Ficedula*
flycatchers"

Advisor: Dr. Anna Qvarnström

Dissertation date: May 13th, 2022

Thesis: <http://uu.diva-portal.org/smash/get/diva2:1647108/FULLTEXT01.pdf>

Current position:

2022 – present Postdoctoral Researcher in the Yoder Lab, Duke University, USA.
Speciation genomics of mouse lemurs.

Publications

Peer-reviewed original articles

Segami, J. C., Lind, M. I. & Qvarnström, A. Should females prefer old males? *Evolution Letters* **5**, 507–520 (2021).

<https://doi.org/10.1002/evl3.250>

Rosser, Neil, Lucie M. Queste, Bruna Cama, Nathaniel B. Edelman, Florian Mann, Ronald Mori Pezo, Jake Morris, **Carolina Segami**, Patricia Velado, Stefan Schulz, James L.B. Mallet, Kanchon K. Dasmahapatra. 2019. “Geographic contrasts between pre- and postzygotic barriers are consistent with reinforcement in *Heliconius* Butterflies.” *Evolution* **73** (9): 1821–38.

<https://doi.org/10.1111/evo.13804>

Segami Marzal, J. C., Rudh, A., Rogell, B., Ödeen, A., Løvlie, H., Rosher, C., & Qvarnström, A. (2017). Cryptic female Strawberry poison frogs experience elevated predation risk when associating with an aposematic partner. *Ecology and Evolution*, **7**(2), 744–750.

<https://doi.org/10.1002/ece3.2662>

Preprints

Segami, J. C. *et al.* Single-Cell Transcriptomics reveals relaxed evolutionary constraint of spermatogenesis in two passerine birds as compared to mammals. *bioRxiv* 2022.01.22.477241 (2022). doi:10.1101/2022.01.22.477241

Segami, J. C., Mugal, C. F., Cunha, C., Bergin, C., Schmitz, M., Semon, M., & Qvarnström, A. (2022). The genomic basis of hybrid male sterility in *Ficedula* flycatchers. *BioRxiv*, 2022.09.19.508503. <https://doi.org/10.1101/2022.09.19.508503>

Conferences Presentations

2019 ESEB, Turku, Finland: Patterns consistent with Darwin’s Corollary in a *Ficedula flycatcher* hybrid zone. (Oral presentation).

2012 III Congress of marine sciences of Peru (Concimar) Lima, Perú: Systematics, phylogeography and conservation genetics on sharks of economic importance of the Peruvian sea: mitochondrial genome. (Oral presentation).

Public Outreach

2016-2019 Founder, editor and writer at Science Bites (Science divulgation blog in Spanish) <http://sciencebitesperu.weebly.com/> Facebook: @sciencebitesperu

Segami J.C. Should females prefer old males? *Evolution Letters* Editors’ blog (2021) <https://evolutionletters.net/should-females-prefer-old-males/>

Grants and awards

2017 Zoologiska (68 000 SEK)

2018	Zoologiska (71 500 SEK)
2019	Zoologiska (80 500 SEK)
2019	Nilsson-Ehle-donationerna, Fysiografiska foundation (85 000 SEK)
2020	Zoologiska (70 450 SEK)
2021	Zoologiska (32 130 SEK)

Supervision

2018	co-supervised MSc student Karlis Kenlis, Uppsala University, Sweden Research training student Margaux Laurent, Uppsala University, Sweden
2019	co-supervised MSc student Navaneeth Menon, Uppsala University, Sweden Research training student Lan Ma, Uppsala University, Sweden

Teaching

2016 – 2017	Biological Processes I , undergraduate course (lecturer), Peruvian University of Applied Sciences (UPC), Lima, Perú
2016 – 2017	Biological Processes II , undergraduate course (lecturer), Peruvian University of Applied Sciences (UPC), Lima, Perú
2018 – 2020	Ecology , Undergraduate / MSc course (TA), Uppsala University, Sweden Evolutionary Patterns , MSc course (TA), Uppsala University, Sweden
2018 – 2021	Behavioural Ecology , MSc course (TA), Uppsala University, Sweden

Fieldwork

2009	Peruvian Sponge Expedition 2009 (ESPER), Belgium Natural History Museum Sponge collection diving, Piura, Perú
2014 – 2015	Heliconius butterfly specimen collection, Heliconius butterfly rearing and conduction of behavioural essays, 6 months, Tarapoto, Perú. Project part of master thesis supervised by James Mallet at Harvard University.
2015	Strawberry poison dart frog sampling, Bocas del Toro, Panamá
2017 – 2022	<i>Ficedula flycatcher</i> reproductive season monitoring. (May – June) Field team leader, Öland, Sweden

Skills

Languages

Spanish (Mother tongue)
English (Proficiency)
Italian (Proficiency)
Portuguese (Intermediate/Conversational)

Software

Microsoft Office, Affinity design, R, bash.

Relevant experience

-Wet lab experience (PCR, DNA extraction, RNA extraction, dissections, tissue processing, microscopy)

- Basic bioinformatics skills working in UNIX environment, using python and R packages (Samtools, BWA). My main experience is with single-cell genomics analysis (Cell ranger, Seurat, ScVelo, Slingshot, Monocle).
- Using high performance computer clusters (Swedish UPPMAX cluster).
- Experience working with big databases and doing basic statistics and multivariate statistics. I use R for statistical analysis (lme4, BaSTa, ggplot2, among others).
- Animal collecting and handling (amphibians, butterflies, birds), bird mist-netting and banding.
- Leading field teams and supervising students and field assistants.

Reviewing

Evolution, BMC Ecology and Evolution, Molecular Ecology.