

Emeline Favreau

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In my final year of **Bioinformatics PhD** at Queen Mary University of London, I am currently specialising in ant genomics and the **evolution of social organisation**, from the field to the lab and the cluster.

Education

Since 2015: **PhD in ant genomics**, QMUL.

Supervisors: Dr Y. Wurm and Dr M. Reuter. NERC-funded Doctoral Training Programme.

2013 – 2014: MRes Biosystematics at Imperial College London & Natural History Museum, London.

Supervisor: Prof A. Vogler. Merit.

2008 – 2011: BSc Environmental Sciences at Oxford Brookes University, Oxford 1st Class (Hons).

Publications

4 Priyam ... **Favreau** et al (2019) Sequenceserver: a modern graphical user interface for custom BLAST databases. *Molecular Biology and Evolution*. <https://doi.org/10.1093/molbev/msz185>

3 Linard, Crampton-Platt, Moriniere, Timmermans, Andújar, Arribas, Miller, Lipecki, **Favreau**, Hunter, Gómez-Rodríguez, Barton, Nie, Gillett, Breeschoten, Bocak and Vogler (2018) The contribution of mitochondrial metagenomics to large-scale data mining and phylogenetic analysis of Coleoptera. *Molecular Phylogenetics and Evolution*. 128: 1-11.

2 **Favreau**, Martínez-Ruiz, Rodrigues Santiago, Hammond and Wurm (2018) Genes and genomic processes underpinning the social lives of ants. *Current Opinion in Insect Science*. 3926 (4):451-479.

1 Lyal and **Favreau** (2015) The Rectal Valve in Curculionoidea and other Coleoptera (Insecta). *Zootaxa*. 3926 (4):451-479.

Technical

Bioinformatics skills tailored for comparative genomic and transcriptomic analysis

- Data wrangling, R statistical packages, RMarkdown
- Unix Shell writing, HPC
- Version control, git
- Pipeline building:
 - *de novo* **whole genome** assembly and variant calling
 - genome annotation with **RNAseq** data
- Statistical analyses, including GWAS and power analysis
- Population genomics for haplodiploid organisms

Wet lab skills tailored for **short and long reads sequencing**

- Sampling (both team-based and solo fieldwork)
- DNA extraction, including designing my own protocols
- Library preparation

Conferences

▪ Oral presentations

- 2018 Sept **Invited talk**, UC Davis Santiago Ramirez Group, USA
- Sept **Invited talk**, ASU Social Insect Research Group, USA
- Aug IUSSI 2018, Guarujá, Brazil
- Mar **Invited talk**, UCL GEE Seminar, London
- Feb QMUL SBCS Postgraduate Symposium, London
- 2017 Jun Evolution conference, Portland, Oregon, USA
- Jan 50th Population Genetics Group Meeting, Cambridge
- 2016 Dec North-West section of IUSSI Winter Meeting, London

▪ Posters

- 2018 Aug Evolution conference, Montpellier, France
- 2017 Aug ESEB congress, Groningen, Netherlands
- Feb QMUL SBCS Postgraduate Symposium, London
- 2016 Sept NERC DTP conference, London

▪ Symposium organiser

- 2018 Aug Organising and Chairing “Evolution of social organization” symposium at IUSSI Brazil 2018

Grants & Awards

£100,811 for studies, £4,000 for research

- 2018 QMUL PostGraduate Research Fund for US fieldwork
Travel Grant, Royal Entomological Society, IUSSI Brazil 2018
Travel Grant, Royal Society of Biology, IUSSI Brazil 2018
Conference Grant, Genetics Society, Population Genetics Group Meeting
- 2017 Conference Grant, Genetics Society, ESEB
- 2015 PhD Scholarship from London NERC DTP
- 2014 Conference Grant, RES, 2nd Young Natural History Scientists' Meeting, France
- 2013 Masters Scholarship from Entente Cordiale
Study Grant, Ruby and Will George Trust

Teaching Experience

- 2017-18 **Mentoring Ecology and Evolutionary Biology Masters** research project
- 2017 Field course assistant, module Tropical Ecology South Africa
- 2016-19 **Teaching assistant, Masters Bioinformatics course**

Employment

- 2015 Science Technician, Raynes Park High School (6-month full time)
- 2012-15 Coleoptera & Hymenoptera Curator, Natural History Museum London (part-time)
- 2012 **Ecologist**, Centre for Ecology and Hydrology, Wallingford (6-month fieldwork)

Personal Development

- 2016 Social Evolution PhD Course, IST Austria
- 2016 French Ant Course by French Section of IUSSI, Banyuls-sur-mer, France
- 2015 NERC DTP Skills for PhD, NHM London

Outreach

- 2019 Science correspondent with a US middle school student (Letters to a Pre-Scientist)
- 2018 Explaining our research to local community, QMUL Festival of Communities, London
- 2017 **SoapBox** Science Support Volunteer, Brighton

Professional Society Affiliations

- 2018 Society for Molecular Biology and Evolution
Society of Systematic Biologists
- 2017 Linnean Society of London
International Union for the Study of Social Insects (French Section)
European Society for Evolutionary Biology
- 2016 Royal Entomological Society
Genetics Society
International Union for the Study of Social Insects (North-west Section)

Reviewer for

- PeerJ
- Myrmecological News Blog