David García-Callejas

Contact
INFORMATION

Doñana Biological Station (EBD-CSIC)

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RESEARCH Interests

I am a community ecologist broadly interested in understanding the structure and dynamics of ecological assemblages, their spatiotemporal patterns, and their response to global change drivers. In particular, I study the role of biotic interactions in shaping local and regional patterns of diversity and coexistence. In approaching these themes, I aim to bridge theoretical approaches to fundamental questions with field experiments and observations.

CURRENT APPOINTMENTS

Postdoctoral researcher, EBD-CSIC

January 2019 to present

Previous Appointments

Doctoral researcher, CREAF-UABSeptember 2014 to November 2018Research technician, Imperial CollegeJanuary 2014 to August 2014Research technician, University of ÉvoraMarch 2013 to January 2014Research technician, CREAFSeptember 2012 to February 2013

EDUCATION

Ph.D. in Terrestrial Ecology, Universitat Autònoma de Barcelona 11/2018

- Thesis Title: Structure and dynamics of ecological networks with multiple interaction types
- Advisors: Dr. Miguel B. Araújo, Dr. Roberto Molowny-Horas
- Associated stays: Integrative Ecology Lab, Univ. of Sherbrooke (Quebec), 09– 12/2017, supervised by Prof. Dominique Gravel
- Qualification: Magna Cum Laude

M.Sc. .in Terrestrial Ecology, Universitat Autònoma de Barcelona 09/2012

- Thesis Title: Projecting the distribution and abundance of Mediterranean tree species under climate change: a demographic approach
- Advisors: Prof. Javier Retana, Dr. Roberto Molowny-Horas
- 60 ECTS

B.S. in Environmental Sciences, Universidad de Alcalá

07/2010

• 300 ECTS

$\mathbf{B.S.}$ in Computer Science, Universidad de Granada

09/2006

• 180 ECTS

REFEREED JOURNAL PUBLICATIONS

- García-Callejas, D., Molowny-Horas, R., Araújo, M.B., Gravel, D. 2019. Spatial cascades in communities connected by dispersal and foraging. *Ecology*, 100:e02820.
 doi:10.1002/ecv.2820
- [2] García-Callejas, D., Torres, A. 2019. Restauración de interacciones ecológicas: medidas y consecuencias a escala de comunidad. *Ecosistemas*, 28:42-49. doi:10.7818/ECOS.1748

[3] García-Callejas, D., Molowny-Horas, R., Araújo, M.B. 2018. The effect of multiple biotic interaction types on species persistence. *Ecology*, 99:2327– 2337. doi:10.1002/ecy.2465

[4] García-Callejas, D., Molowny-Horas, R., Araújo, M.B. 2018. Multiple interactions networks: towards more realistic descriptions of the web of life. Oikos, 127:5–22. doi:10.1111/oik.04428 (Editor's choice)

- [5] García-Callejas, D., Molowny-Horas, R., Retana, J. 2017. Projecting the distribution and abundance of Mediterranean tree species under climate change: a demographic approach. *Journal of Plant Ecology*, 10:731–743. doi:10.1093/jpe/rtw081 (Editor's choice)
- [6] García-Callejas, D., Araújo, M.B. 2016. The effects of model and data complexity on predictions from species distributions models. *Ecological Modelling*, 326:4–12. doi:10.1016/j.ecolmodel.2015.06.002

PREPRINTS AND PAPERS IN PREPARATION

- [7] García-Callejas, D., Godoy, O., Bartomeus, I. CXR: A toolbox for modelling species coexistence in R. *Manuscript under review*.
- [8] Mestre, F., Gravel, D., **García-Callejas, D.**, Pinto-Cruz, C., Matías, M.G., Araújo, M.B. Disentangling environment food web relationships: a review with guidelines *Manuscript under review*.
- [9] García-Callejas, D., Bartomeus, I., Godoy, O. Manuscript in preparation.
- [10] García-Callejas, D. On the variability of Species Abundance Distributions with trophic guild and community structure. Preprint available: biorXiv, 289348 doi:10.1101/289348

Conference Talks

- [11] **García-Callejas, D.**, Molowny-Horas, R., Araújo, M.B., Gravel, D. Spatial cascades in networks connected by dispersal and foraging. In: *SIBECOL*, Barcelona, 04–07/02/2019.
- [12] García-Callejas, D., Molowny-Horas, R., Araújo, M.B. Species persistence in networks with multiple interaction types. In: NetSci conference, Paris, 11– 14/06/2018.
- [13] **García-Callejas, D.** The influence of trophic position on Species Abundance Distributions. In: *Ecology across borders*, Ghent, 11–14/12/2017.

Conference Posters

- [14] Mestre, F., García-Callejas, D., Pinto-Cruz, C., Matías, M., Araújo, M.B. Environmental correlates of food web structure. In: 9th biennal conference of the International Biogeography Society, Málaga, 08–12/01/2019.
- [15] **García-Callejas, D.**, Molowny-Horas, R., Araújo, M.B. Multiple interactions networks: towards more realistic descriptions of the web of life. In: *Community Ecology for the 21st Century*, Évora, 17–19/10/2016. (Best poster award)

INVITED TALKS

- [16] García-Callejas, D., Molowny-Horas, R., Araújo, M.B. Multiple interactions networks in community ecology: towards more realistic representations of the web of life. In: *Centre for Advanced Studies*, Blanes, 10/01/2019.
- [17] García-Callejas, D., Molowny-Horas, R., Retana, J. Distribution and abundance of tree species: A spatially explicit model for Peninsular Spain. In: Forest sciences centre of Catalonia, Solsona, 10/12/2012.

Teaching EXPERIENCE

Universitat Autònoma de Barcelona

2015-2018

Field/practical courses

- Ecology (B.S. in Environmental Sciences) 62h
- Ecology (B.S. in Biology) 15h
- Analysis and of environmental cartography (B.S. in Env. Biology) 19h
- Analysis and cartography of vegetation (B.S. in Biology) 23h

$Theoretical\ courses$

- Statistics and environmental modelling (M.Sc. in Terrestrial Ecology) 2h
- Conservation Biology (B.S. in Env. Biology) 12h
- Forest Ecology (B.S. in Env. Biology) 1h

CREAF 2018

Seminar: Introduction to Latex and Zotero

• 5h in 2 sessions

Rui Nabeiro Biodiversity Chair

2013

Course: Introduction to the R Language

• 12h in 3 sessions

Awards

- FPU Visiting researcher scholarship, 2017. Science and Education Ministry, Spain.
- FPU Ph.D. scholarship programme, 2014–2018. Science and Education Ministry, Spain.
- M.Sc. scholarship programme, 2011–2012. "Fundación Obra Social La Caixa", Spain.
- International stay scholarship, 2010. "Fundación Bancaja", Spain.

Languages

- First Language: Spanish.
- English: Profficient reading, speaking, writing.
- Catalan, Portuguese, Italian: Intermediate reading, basic speaking and writing.

- SOFTWARE SKILLS Profficiency in R (statistical analyses, data management, dynamic models)
 - Intermediate user of C++.
 - Familiarity with QGIS.
 - Git user, expertise in Latex and reference management software (Zotero).