

# Zeynep Ersoy



POSTDOCTORAL RESEARCHER IN UNIVERSIDADE DE ÉVORA · CÁTEDRA RUI NABEIRO - BIODIVERSIDADE

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## Summary

I'm an aquatic ecologist interested in biotic and environmental factors shaping **trophic interactions** in freshwater food webs from fish to phytoplankton. Mainly, I focus on body size structure as an alternative to taxonomy. My study includes various approaches ranging from **mesocosm experiments** to environmental monitoring in order to investigate prey-predator interactions, energy transfer and **ecosystem functioning**.


## Education

 **University of Vic-Central University of Catalonia (UVic-UCC)** *Vic, Spain*  
PHD IN AQUATIC ECOLOGY, EXPERIMENTAL SCIENCES AND TECHNOLOGY PROGRAM *2015 - 2018*

- **Thesis Title:** Biotic and environmental factors shaping body size distributions in freshwater planktonic food webs
- **Advisors:** Sandra Bruçet & Mireia Bartrons
- Tutored two biology undergraduate students for internal practices

 **Middle East Technical University (METU)** *Ankara, Turkey*  
MSC IN BIOLOGY, SPECIALIZED IN LIMNOLOGY *2012 - 2015*

- **Thesis Title:** Impact of nutrient and water level changes on the submerged macrophytes along a latitudinal gradient: A Pan-European mesocosm experiment
- **Advisor:** Meryem Beklioğlu
- Courses on Shallow Lakes, GIS, Advanced Techniques in Field Ecology, Statistical Methods for Informatics, Computational Biology Using R
- Two academic years of **teaching experience** in laboratory sessions, including Freshwater Ecology and Molecular Biology courses
- **CGPA:** 3.93/4.00

 **Middle East Technical University (METU)** *Ankara, Turkey*  
BSC IN BIOLOGY (MAJOR) AND ENVIRONMENTAL MICROBIOLOGY (MINOR) *2007 - 2012*

- One of the top Biology degrees in Turkey
- Courses on Introduction to Genetics, Freshwater Ecology, Field Ecology, Conservation Ecology and Evolution
- **CGPA:** 3.66/4.00

## Projects

- 2018–2019 **Collaborator-** Urban Algae - Ecological Status and the Perception of Ecosystem Services of Urban Ponds (2<sup>nd</sup>) *Spain*  
Collaborative European Freshwater Science Project for Young Researchers - FreshProject)
- 2016–2018 **Collaborator-** AGRHYDROM- A timely look at effects of agriculture on fluvial DOM: the role of hydrology, 2<sup>nd</sup> *Spain*  
Young Collaborative Project from the Iberian Association of Limnology (AIL)
- 2015–2017 Restoration of Mediterranean temporary ponds in Can Torres (Serra de l'Albera). Funded by ANDRENA. *Spain*
- 2014–2015 Will climate-related changes in fish stocks lead to significant ecosystem shifts in the natural eutrophic Lake Myvatn (Iceland)? Funded by Carlsberg Foundation *Spain*

## Professional Experience

 **The “Rui Nabeiro” Biodiversity Chair, Universidade de Évora** *Évora, Portugal*  
POSTDOCTORAL RESEARCHER *July 2019 - Present*

- **Project:** AdaptAlentejo – Predicting ecosystem-level responses to climate change
- **Advisors:** Miguel Matias & Miguel Araujo

 **Leibniz-Institute of Freshwater Biology and Inland Fisheries (IGB)** *Berlin, Germany*  
GUEST PHD FELLOW *Apr. - Dec. 2016*

- **Project:** Recovery rate of zooplankton **body size distributions** after massive fish predation (mesocosm experiment)
- **Advisor:** Thomas Mehner



- **Project:** Assessment of changes in macrophyte communities in Lake Stigsholm using long-term monitoring data
- **Advisors:** Martin Søndergaard & Torben Lauridsen
- Course on Models and Monitoring Data in Nature and Environment Management



**European Union Project - REFRESH**

*Ankara, Turkey*

PROJECT ASSISTANT

*2012 - 2014*

- **Project:** Adaptive strategies to mitigate the impacts of climate change on European freshwater ecosystems
- Statistical analysis of aquatic vegetation data of the mesocosm experiment as a part of master project
- Homepage: [www.refresh.ucl.ac.uk](http://www.refresh.ucl.ac.uk)



**Scientific and Technological Research Council of Turkey (TÜBİTAK)**

*Ankara, Turkey*

PROJECT ASSISTANT

*2012 - 2013*

- **Project:** Determination of mitigation and adaptation strategies by determining the role and factors affecting the development of submerged macrophytes in the past, present and future warmer conditions in shallow lakes in the Mediterranean climatic region
- Participating in summer field work & laboratory analysis



**Ministry of Health, National Public Health Agency**

*Ankara, Turkey*

INTERN

*2011*

- Summer internship at the Water and Food Microbiology Laboratories

## Skills

- **Programming:** R (ggplot2, tidyverse, nlme, Rmarkdown and related packages), Python (beginner)
- **Languages:** Turkish (native), English (proficient), Catalan (elementary), Spanish (beginner)
- **Laboratory:** Water chemistry analysis, plankton and macroinvertebrate identification & enumeration, bacteria and yeast culture preparation

## Grants & Awards

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|------|--|--------------------------|
| 2018 | Representative of Spain, SIL Student Competition for the best published article in Limnology | <i>Vic, Spain</i>        |
| 2018 | AIL 2018 Coimbra Conference Registration Grant   | <i>Coimbra, Portugal</i> |
| 2018 | TÜBİTAK International Scientific Publications Incentive Award                                | <i>Ankara, Turkey</i>    |
| 2016 | UVic-UCC, International Research Stay Grant  | <i>Vic, Spain</i>        |
| 2016 | Wetzel SIL Congress Travel Award   | <i>Turin, Italy</i>      |
| 2016 | International IGB Fellowship, Leibniz-Institute of Freshwater Biology and Inland Fisheries   | <i>Berlin, Germany</i>   |
| 2015 | Antiga Caixa Manlleu & BBVA Foundation, International Mobility Grant                         | <i>Vic, Spain</i>        |
| 2015 | UVic-UCC, Predoctoral Fellowship   | <i>Vic, Spain</i>        |
| 2014 | ERASMUS Student Mobility Grant   | <i>Aarhus, Denmark</i>   |
| 2012 | Graduated in High Honor Roll (Ranked 3rd among 50 Biology graduates)                         | <i>Ankara, Turkey</i>    |

## Publications & Presentations

### PUBLISHED JOURNAL ARTICLES

- **Ersoy, Z.**, Brucet, S., Bartrons, M., Mehner, T. Experimental tests of fish predation on zooplankton, and recovery rate of zooplankton community structure after stop of predation, **PLoS ONE (2019)**, 14(2): e0212351.
- **Ersoy, Z.**, Jeppesen, E., Sgarzi, S., Arranz, I., Cañedo-Argüelles, M., Quintana, X.D., Landkildehus, F., Lauridsen, T.L., Bartrons, M., Brucet, S. Size-based interactions and trophic transfer efficiency are modified by fish predation and cyanobacteria blooms in Lake Mývatn, Iceland. **Freshwater Biology (2017)**, 62, 1942-1952, doi: 10.1111/fwb.13039
- Brucet, S., Tavşanoğlu, U.N., Özen, A., Levi, E., Bezirci, G., Çakiroğlu, A.İ., Jeppesen, E., Svenning, J.C., **Ersoy, Z.**, Beklioğlu, M. Size-based interactions across trophic levels of food webs in shallow Mediterranean lakes, **Freshwater Biology (2017)**, 62, 1819-1830, doi: 10.1111/fwb.12997
- Cañedo-Argüelles, M., Sgarzi, S., Arranz, I., Quintana, X.D., **Ersoy, Z.**, Landkildehus, F., Lauridsen, T., Jeppesen, E., Brucet, S. Role of predation in biological communities in naturally eutrophic subarctic Lake Mývatn, Iceland, **Hydrobiologia (2017)**, 790,1,213–223, doi:10.1007/s10750-016-3031-0

### ARTICLES IN PREPARATION

- **Ersoy, Z.**, Brucet, S. Intraspecific variation in developmental stages of zooplankton affects phytoplankton community size structure
- **Ersoy, Z.**, Bucak, T., Levi, E.E., Beklioğlu, M., Papastergiadou, E., Stefanidis, K., Nöges, T., Feldmann, T., Hejzlar, J., Šorf, M., Scharfenberger, U., Mahdy, A., Baho, D.L., Trigo, C., Søndergaard, M., Jeppesen, E. Impact of nutrient and water level changes on submerged macrophytes along a temperature gradient: Pan-European mesocosm experiments

## ORAL PRESENTATIONS

- **Ersoy, Z.**, Bartrons, M., Mehner, Jeppesen, E., Brucet, S. Influence of fish predation on size-based interactions and recovery of zooplankton communities in freshwater planktonic food webs: Examples from mesocosm experiments, **EEBST 2019**, 10-12 July 2019, Ankara, Turkey
- **Ersoy, Z.**, García-Comas, C., Bartrons, M., Hsieh, C.H., Brucet, S. Influence of prey and predator size diversity on trophic transfer efficiency in freshwater and marine ecosystems, **SIBECOL 2019**, 4-7 February 2019, Barcelona, Spain
- Beklioğlu, M., **Ersoy, Z.**, Bucak, T., Levi, E.E., Papastergiadou, E., Stefanidis, K., Nöges, T., Feldmann, T., Hejzlar, J., Šorf, M., Scharfenberger, U., Mahdy, A., Baho, D.L., Trigal, C., Søndergaard, M., Jeppesen, E. Impact of nutrient and water level changes on submerged macrophytes along a temperature gradient: A Pan-European mesocosm experiment, **SIL 2018**, 19-24 August 2018, Nanjing, China.
- **Ersoy, Z.**, Bartrons, M., Mehner, T., Brucet, S. Recovery rate of zooplankton community structure after stop of fish predation, **AIL 2018**, 24-29 June 2018, Coimbra, Portugal.
- del Campo R., Abril, M., Alirangues-Núñez, M. M., Arenas-Sánchez, A., del Real, R.A, Arranz, I., Bruno, D., Calapez A.R, Casas-Ruiz, J.P., Castaño, A., Castro, D., Cid, N., Colls, M., De Castro-Català, N., Duarte, S., **Ersoy, Z.** et al. AGRHYDROM. A timely look at effects of agriculture on fluvial DOM: the role of hydrology, **AIL 2018**, 24-29 June 2018, Coimbra, Portugal.
- Sgarzi, S., Badosa, A., Benejam, L., Leiva A., Arranz, I., Bartrons, M., **Ersoy, Z.**, Brucet, S. Size-based interactions in pelagic trophic webs of Mediterranean freshwater and brackish ponds, **SEFS 2017**, 2-7 July 2017, Olomouc, Czech Republic.
- **Ersoy, Z.**, Jeppesen, E., Sgarzi, S., Quintana, X.D., Arranz, I., Cañedo, M., Landkildehus, F., Lauridsen T.L., Einarsson, Á., Brucet, S. Size-based interactions within the food web of Lake Mývatn, Iceland: a mesocosm experiment, **SIL 2016**, 31 July-5 August 2016, Torino, Italy.
- Brucet, S., **Ersoy, Z.**, Jeppesen, E., Sgarzi, S., Quintana, X.D., Arranz, I., Cañedo, M., Landkildehus, F., Lauridsen T.L., Einarsson, Á. Size-based interactions across trophic levels of the planktonic food web: a lake mesocosm experiment, **AIL 2016**, 4-8 July 2016, Tortosa, Spain.
- Sgarzi, S., Cañedo, M., Arranz, I., Quintana, X.D., **Ersoy, Z.**, Jeppesen, E., Brucet, S. Role of predation in biological communities in naturally eutrophic subarctic Lake Mývatn (Iceland), **AIL 2016**, 4-8 July 2016, Tortosa, Spain.
- **Ersoy, Z.**, Beklioğlu, M., Levi, E.E., Papastergiadou, E., Stefanidis, K., Nöges, T., Feldmann, T., Hejzlar, J., Šorf, M., Scharfenberger, U., Mahdy, A., Baho, D.L., Trigal, C., Søndergaard, M., Jeppesen, E. Impact of nutrient and water level changes on submerged macrophytes along a latitudinal gradient: Pan-European mesocosm experiments, **8<sup>th</sup> International Shallow Lakes Conference**, 12-17 October 2014, Antalya, Turkey.
- **Ersoy, Z.**, Beklioğlu, M., Filiz, N., Kangro, K., Feldmann, T., Hejzlar, J., Šorf, M., Papastergiadou, E., Stefanidis, K., Scharfenberger, U., Mahdy, A., Angeler, D., Baho, D.L., Søndergaard, M., Jeppesen, E. Effect of Climate Change, Eutrophication and Water Level Change on Macrophytes: A Pan-European Mesocosm Experiment from Sweden to Turkey, **3<sup>rd</sup> National Wetlands Congress**, 23-25 October 2013, Samsun, Turkey.

## Memberships

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2017-Present **European Fresh and Young Researchers (EFYR)** representative of **European Federation for Freshwater Scientists (EFFS)**

2015-Present Member, **International Society of Limnology (SIL)**

2015-Present Member, **Iberian Association of Limnology (AIL)**

2015-Present Member and Bulletin Working Group, **Ecology and Evolutionary Biology Society of Turkey (Eko-Evo)**

## Professional Activities

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- **Supervision:** David José Batista Reisinho, Master thesis at Universidade de Évora, Reconstructing the aquatic food web of the Alqueva dam: a bibliographic, morphological and molecular approach
- **Reviewer:** Water, Aquatic Sciences, Climatic Change, Anais da Academia Brasileira de Ciências, Environmental Science and Pollution Research
- **Organizations:** Organizing committee member **2<sup>nd</sup> Ecology and Evolutionary Biology Symposium**, **8<sup>th</sup> Shallow Lakes Conference** and **"Still waters run deep: Past, present and future scientific careers in limnology"** workshop in **SEFS 2019**

## Completed MOOC

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- **Introduction to Python for Data Science.** edX.org 2017
- **Introduction to R Programming.** edX.org 2015
- **Programming for Everybody (Getting Started with Python).** Coursera.org 2015

## Extra-Curricular Activities

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- **STEM mentoring** and **science communication** at Epistem Turkey (epistemturkiye.org), 2018-Present
- Volunteer **translator** at Turkish environmental newspaper website (yesilgazete.org) and at TED Talks, 2014-2016
- Volunteer **author** and **translator** at Turkish scientific news website (haber.sol.org.tr/bilim), 2016-2018