GÜLCE YALÇIN

PHD CANDIDATE IN FRESHWATER ECOLOGY | MARINE BIOLOGIST, M.SC.

DATE OF BIRTH: 07/09/1990 I PLACE OF BIRTH: İzmir/Turkey I CITIZENSHIP: Citizen of Turkey
MARITAL STATUS: married I MAIDEN NAME: Saydam

OBJECTIVE

-Community ecology
-Disturbance ecology and Ecological impacts in Freshwater Ecosystems

EXPERIENCE

ACADEMIC/TEACHING ASSISTANT • METU, ECOSYSTEM IMPLEMENTATION AND RESEARCH CENTER., http://ekosam.metu.edu.tr/en • 02.2020-TODAY

As EKOSAM, we conduct "ecosystem-based" research in order to provide scientific data to decide and apply best conservation measures.

RESEARCH PROJECT ASSISSTANT /PHD CANDIDATE • METU, BIOLOGICAL SCIENCES, LIMNOLOGY LAB., http://limnology.bio.metu.edu.tr/• 11.2017-TODAY

Manager/ Thesis Advisor: Prof. Meryem Beklioğlu

I have been working in the AQUACOSM project which is a multinational Horizon 2020 EU project as a researcher and as a PHD student:

As a researcher I involved in:

- Experimental planning and decision making
- Deciding on the local hypothesis as a partner of the project
- Field survey planning
- Finding Transnational Access Teams, planning their scientific participation to our research
- Team coordination

As a PhD student:

- Leading limnology lab in terms of purchasing all the laboratory needs and planning the laboratory experiments/analysis
- Doing the analyses required for the mesocosms and my thesis involving tasks with ArcMAP (for GIS tasks), R and Python (For Statistical tasks)
- Observing phytoplankton, bacteria, ciliates and heterotrophic nano flagellates to test the hypothesis of “considering the climate change related anthropogenic impacts on the freshwater systems, how does freshwater microbial community structure is effected”.
- Giving lectures and planning literature sessions to undergraduate students/volunteers of the lab

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EXTERNAL MARINE ENVIRONMENTAL CONSULTANT • DHI POLAND • 06.2017-12.2018
Manager: Dr. Frank Thomsen frth@dhigroup.com
Major tasks: community ecology, modelling, statistical clustering for species identification
As an external consultant, I provide consultancy on noise impact assessment by performing absolute density analysis and distribution mapping of Baltic harbour porpoises using C-POD data.

MARINE BIOLOGIST • DHI, www.dhigroup.com • 04.2016-08.2017
Manager: Dr. Frank Thomsen frth@dhigroup.com
Major tasks: community ecology, modelling, statistical clustering for species identification of Baltic Sea Cetaceans
As a part of multinational marine mammal team, I participated in the assessment of noise related impacts in EIA studies as marine mammal acoustics expert. Projects were mainly focused on the effects of offshore energy and construction on harbor porpoises in the Baltic Sea. My main responsibilities involved:

- C-POD analysis for assessing cetacean distribution and abundance in the project area.
- Aiding noise modelling with UAS (Underwater Acoustic Simulator) and Matlab.
- Obtaining decision on the impact criteria and impact ranges depending on the results and literature.
- Writing the quarterly reports, PEIA and EIA report to the client.
- Preparing online courses focused on the underwater impact assessment for marine mammals as an instructor:
  http://www.dhigroup.com/upload/publications/course-calendar/DK_Online_CourseDescription_ManagingImpactsUnderwaterNoise_UK.pdf

RESEARCH ASISTANT-MSC STUDY • Marine Biology and Fisheries Department, METU- IMS, www.ims.metu.edu.tr • 09.2013-12.2015
Major Tasks: Community Ecology, GIS, Bio-diversity of Black Sea Cetaceans
Manager/ Thesis Advisor: Prof. Ali Cemal Gucu

During the two years of Research Assistantship in METU-IMS, I mainly performed:

- Reporting, editing and follow-up of TUBITAK and EU projects
- Field work and data analysis of bio-diversity research projects: ship-based marine mammal observation surveys, fish stock-assessment surveys, monk seal population surveys
- Educational material preparation: poster/presentation preparation and giving seminars as instructor for public awareness projects.
- Participating international seminars and conferences (ECS) for scientific presentation and for the representation of the institute.

TRAININGS

2018 September, Izmir TR, Aegean school for computational ecology and evolution, 7 days:

The school brought together researchers and students actively working in the fields of ecology and evolution from both sides of the Aegean Sea. The school included lectures and practices covering both fundamental models and most recent developments across a diverse range of topics, including population genomics, comparative phylogenetics, and theoretical and experimental ecology.

2018 July, Izmir TR, R workshop, 2 days:
In the workshop given by EkoEvo (Ecology and Evolotionary Society of Turkey), data analysis and community biology methods in R were covered.

2017 May, Mousehole UK, C-POD Workshop, 2 days:
In the workshop given by Nick Tregenza, C-POD-F and C-POD were covered in addition to the data interpretation and analysis.

2017 March, Exeter UK, Marine Acoustics Training by Seiche, 4 days:
The lectures by V. F. Humprey were focused on physical properties of sound, nature of noise, while lectures given by P. Lepper were on marine mammal biology and models that are used to measure underwater acoustics (transmission loss). Furthermore, mitigation techniques for underwater noise, environmental regulations, Environmental Impact Assessments (EIAs), guidelines, emerging studies and technologies in the Marine Acoustics field were covered.

2016, DHI-Turkey, MIKE 11-Ecolab Training, 2days:
The course given by Dr. Arne Hammrich was focused on ecological modelling with Ecolab and Mike 11.

2014, September, Valencia Spain, Tenth European Seminar on Marine Mammals: Biology and Conservation, 5 days
This course was mainly focused on the aspects of management and strategies for species conservation, including marine protected areas, at European and world scales. There were practical demonstrations of laboratory techniques applied to the research on marine mammals; such as Line transect analysis and acoustic approaches.

REFERENCES

Prof. Meryem Beklioğlu, METU Biology, meryem@metu.edu.tr
Dr. Frank Thomsen, Senior Expert In Noise Related Impact Assessment, Business Development Manager, DHI, frth@dhigroup.com
Asst Prof. Bariş Salihoğlu, Director of METU-IMS, baris@ims.metu.edu.tr
Dr. Peter Evans, Sea Watch Foundation Founder and Director & Honorary Senior Lecturer In Bangor University, peter.evans@bangor.ac.uk

PROJECTS

2018-2020, AQUAcosm (Active Project): EU network of mesocosms facilities for research on marine and freshwater ecosystems open for global collaboration.

AQUACOSM is funded by the first international call (EU H2020-INFRAIA) to coordinate research, develop common best practices and open both freshwater and marine large-scale research infrastructures (mesocosms) for international cross-discipline participation. My PhD is funded by Aquacosm project and I am employed as a researcher in the mesocosm facility in Turkey. For the specific tasks performed please see the experience section.

2020-2023, METU, TUBITAK 1001 (Acronym: R3-DOC, Project No:119Y265) (Accepted Project):

Within the context of my PhD qualification exam, I wrote this project under the advisory of Prof.Dr. Meryem Beklioğlu, Prof. Emmanuel Manolis Ludakakis and Prof. Efe Sezgin. Project aims to investigate Resistance, Recovery and Resilience of Freshwater Communities to the terrestrial Dissolved Organic Carbon (t-DOC).

2016-2017, DHI-Poland (Completed Project): Marine Mammal and Noise Impact Assessment Projects (Limited detail due to Confidentiality)

I performed noise impact assessment in EIA projects as Marine mammal specialists. Projects involved the effects of offshore wind farms, pipelines and nuclear power plants on harbor porpoises in the Baltic Sea. For the specific tasks performed please see the experience section.

2014- 2015, METU, TUBITAK (Completed Project): Viability assessment of northeastern Mediterranean Monk seal population

Eastern Mediterranean coastal region is scanned for possible suitable habitats and photo-traps are set to build data set for photo-ıd study of Monk Seals. I participated in the process of setting photo-traps in caves with free diving, data analysis (PVA) and reporting.

2014- 2015 METU, Stock Assessment of Black Sea Anchovy Using Acoustic Method and Establishing a Monitoring Model for National Fisheries Data Collection Program, TUBITAK – KAMAG 110G124 (Completed Project):

The project was designed to observe anchovy stocks for fisheries management. I participated in trawling process (50 days cruise with RV Bilim 2); length measurement of fishes on deck, data analysis and reporting/editing. During the cruises of this project, I collected data for my thesis; I observed cetaceans from upper deck and deployed C-POD on stations.

2013-2015 TUBITAK: Present monitoring the changes in demersal fish stocks in fishing area of Erdemli – Mersin (the northeastern Mediterranean)(Completed Project):

The project was designed to provide time series data on demersal fish stocks and habitat. Possible roles of Lessepsian species in the ecosystem was assessed in – 1-2days/month cruises 2 years with R/V Lamas.

2013-2014 METU, TUBITAK 113B221: I know my Sea I protect my Sea (Completed Project):

The project was designed to increase awareness, knowledge and consciousness on sea ecosystem in elementary-high school level children. I participated as a lecturer and I produced several biological illustrations for training purposes.

EDUCATION

BS • 2013 JUNE• DEPARTMENT OF BIOLOGY, MIDDLE EAST TECHNICAL UNIVERSITY, ANKARA, TURKEY

Graduated as Honor Student, ranked sixth among Biology graduates of academic year 2012-2013, CGPA: 3.32/4.00

M.SC• 2015 • MARINE BIOLOGY AND FISHERIES DEPARTMENT, INSTITUTE OF MARINE SCIENCES, MIDDLE EAST TECHNICAL UNIVERSITY

Student Performance Award, Academic year of 2013-2015 ; C.GPA: 3.93/ 4.00

PHD STUDENT• 2017 • LIMNOLOGY LAB, BIOLOGICAL SCIENCES, MIDDLE EAST TECHNICAL UNIVERSITY

I am interested in the anthropogenic impacts on the freshwater community structure and I am using mesocosm sytems to test my hypotheses. My fist chapter includes the effects of microplastics.

SCIENTIFIC PUBLICATIONS

THESIS

Saydam G., Cetacean Distribution in the Southern Black Sea: An Acoustic Approach (Published Master Thesis), Graduate School Of Marine Sciences, Middle East Technical University, 2015 September

CONFERENCE TALKS

Saydam G., Gucu A.C., Ok M., Sakinan S., Sahin E, Tutar O. Population Viability Analysis Of Mediterranean Monk Seal (Monachus Monachus) And Significance Of Dispersal In Survival (Northeast Mediterranean Sea), 28th Annual Conference Of European Cetacean Society, 2014 Liège

Saydam G., Gucu A.C., Cetacean Distribution in Southern Black Sea: An Acoustic Approach Using A Methodology Combining Active And Passive Acoustics, 29th Annual Conference Of European Cetacean Society, 2015 Malta

Gülce Yalçin, Dilvin Yildiz, Boris Jovanovic, Derya Öztürk, Lucie Vebrová, David Boukal, Djuradj Milošević, Dimitrija Savić, Jelena Stanković, Jessica Richardson, Heidrun Feuchtmayr, Melisa Metin, Deniz Balkan,

Yasmin Akyürek & Meryem Beklioğlu, In-situ Mesocosms Experiment for Investigating Impacts of Microplastics on Food Web of Shallow Lakes, ASLO, 2019 February

Heidrun Feuchtmayr, Jessica Richardson, David Boukal, Meryem Beklioglu, **Gülce Saydam**, Dilvin Yıldız, Boris Jovanovic, Derya Öztürk, Lucka Veb, Ami Weir, Uptake and transfer of microplastics in freshwater organisms: a mesocosm experiment, Plastics in the environment workshop, Wallingford, UK, 2019 February

Jelena Stanković, Boris Jovanović, Dimitrija Savić Zdravković, Djuradj Milošević, Meryem Beklioğlu, Dilvin Yıldız, **Gülce Yalçın**, Influence of mixture of microplastic particles (MP) on non-biting midges of Chironomus riparius in laboratory setup, 11th Symposium for European Freshwater Sciences, Zagreb, Croatia, 2019 May

Dilvin Yildiz; **Gülce Yalçin**; Boris Jovanovic; Derya Öztürk; Lucie Vebrova; David Boukal;Djuradj Milosevic; Dimitrija Savic; Jelena Stankovic; Jessica Richardson; Heidrun Feuchtmayr; Meryem Beklioğlu, First in-situ mesocosms experiment for investigating impacts of microplastics on littoral food web, 11th Symposium for European Freshwater Sciences, Zagreb, Croatia, 2019 May

Dilvin Yıldız, **Gülce Yalçın**, Meryem Beklioğlu, Mesocosm experiment on effects of microplastic on freshwater zooplankton community, Ecology and Evolutionary Biology Symposium 2019, Ankara, Turkey, 2019 July

PAPERS

Jelena Stanković, Djuradj Milošević, Dimitrija Savić-Zdraković, **Gülce Yalçın,** Dilvin Yildiz, Meryem Beklioğlu, Boris Jovanović, Exposure to a microplastic mixture is altering the life traits and is causing deformities in the non-biting midge Chironomus riparius Meigen (1804), Environmental Pollution, Volume 262, 2020, 114248, ISSN 0269-7491, https://doi.org/10.1016/j.envpol.2020.114248.

COMPUTER SKILLS

-Statistical analysis and Data visualization using R and Python at intermediate level
and using SPSS at beginner level
-CPOD software (C.POD.exe, Chelonia Ltd., Cetacean Monitoring Systems) for cetacean vocal analysis – at advanced level
-Matlab for noise propagation modelling at beginner level
-ArcGIS at intermediate level for mapping
- Echoview software (SIMRAD EK60, Scientific echo sounder, SIMRAD EK System) for fisheries acoustic Analysis at advanced level
-MIKE products: Ecolab, MIKE11, Underwater Acoustic Simulator (UAS) at beginner level

HOBBIES

Scuba Diving (PADI Advanced Scuba Diver, 5 years) & swimming, Yoga, Camping, Artistic Drawing, Piano (4 years) and Singing (Member at university voice chorus, department of music and fine arts; chief: Tuncay Doğu and Anchorus Chorus; chief: Cihan Selçuk).