

# Gülsemi KIRGIL

## PERSONAL

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Address: Ankara, Türkiye

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## EDUCATION

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2022 – present

Master of Science (M.Sc.) in **Biology (Ecology)**, Hacettepe University, Graduate School of Science and Engineering, Ankara, Türkiye

Functional Ecology Laboratory (Web site: <https://funecol.org/>)



Seminar: Climate Change Effects on Biodiversity and Abundance of Insects (in Turkish; 01/11/2023)

Thesis (provisional title): *Comparison of pollinator insect diversity in common and rare plant species growing in marl steps by using eDNA metabarcoding* (will be in Turkish; Supervisor: Prof. Dr. Çağatay Tavşanoğlu, Co-supervisor: Prof. Dr. Emre Keskin)

2014 – 2021

Bachelor of Science (B.Sc.) in **Molecular Biology and Genetics**, İstanbul University, İstanbul, Türkiye. (CGPA: 3.04/4.00)



\* The Bachelor thesis: *Theoretical Assessment of the Evolution of Eusocial Behavior in Insects from the Eco-Evo-Devo Perspective* (in Turkish; 96 pages; Supervisor: Asst. Prof. Dr. Çağatay Tarhan)

2014-2015: İstanbul University / English Prep School

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## ACADEMIC INTERESTS AND SKILLS

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- Community ecology
- Insect ecology
- Insect interactions (plant-insect interactions (especially pollination), intra-specific interactions of insects)
- Eusocial insects (especially bees and ants; eusocial behavior in insects, evolution of eusocial behavior)
- Ecophysiology (How ecological factors affect evolutionary developmental patterns; developmental and phenotypic plasticity)
- Epigenetics
- Eco-Evo-Devo
- Aging (Aging in eusocial insects)

## INTERNSHIPS & RESEARCH EXPERIENCE

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03/14/2022 - 10/18/2022

**Biodiversity and Conservation Laboratory**, Middle East Technical University, Ankara, Turkiye



Advisor: Prof. Dr. Can Bilgin

Topics: Biodiversity, honeybee diversity and richness, conservation genomics, project design.

Web site of laboratory: <https://blog.metu.edu.tr/cbilgin/>

01/31/2022 - 03/11/2022

**Evolutionary Genetics Laboratory**, Ankara University, Ankara, Turkiye.



Advisor: Prof. Dr. Emre Keskin

Topics: eDNA metabarcoding, DNA and RNA isolation, PCR and qPCR, bioinformatics (MEGA and OBITools).

Web site of laboratory: <https://eglbio.com/>

## WORK EXPERIENCES

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2018-2021

Bilim ve Gelecek - **Scientific journalism / Editor**

## HOBBIES & INTERESTS

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2015 - 2019

İstanbul University, Faculty of Science, Theatre Club

(2017 - 2019: **Chairman of Theatre Club**)

## COMPUTER SKILLS

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**Analysis skills:** R, OBITools

**Other:** Microsoft Programs, Adobe Programs (Photoshop, Premiere Pro, InDesign)

## LANGUAGE SKILLS

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Turkish: Native

German: Elementary

English: Fluent

Japanese: Elementary

## MEMBERSHIPS

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2023- present                      Ecology and Evolutionary Biology Society  
(Web site: <https://www.ekoevo.org/en/>)

## SCOLARSHIPS

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11/26/2024 - present              Scholarship student in TUBITAK 1002 project  
(Revealing the resource-use strategies and aboveground and belowground functional trait structure in a marly steppe plant community)

10/01/2022 – 09/30/2024        **The Scientific and Technological Research Council of Turkey (TUBITAK) National Master Scholarship Program**

11/24/2022 – 05/22/2024        Scholarship student in TUBITAK 1001 project  
(Climate effects on activity patterns and trophic interactions of *Myotis myotis*)

## ACADEMIC EXPERIENCES

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June 2023 – present              Coordinator of Functional Ecology Laboratory

## SCIENTIFIC PRESENTATIONS

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- Oral presentation on “*Species diversity, abundance and community composition of Carabidae (Coleoptera) across habitats in north central Anatolia*” at **10<sup>th</sup> Ecology and Evolutionary Biology Symposium (EEBST 2024)**. (25 July 2024; Çanakkale On Sekiz Mart University, Çanakkale/Türkiye)

## PROJECTS

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- TUBITAK 1001  
(Scholarship student)              Climate effects on activity patterns and trophic interactions of *Myotis myotis* (Greater mouse-eared bat) (Project code: 121Z307)
- TUBITAK 1002  
(**Thesis project**)                      Comparison of pollinator insect diversity in common and rare plant species growing in marl habitats via eDNA metabarcoding (Project code: 124Z153)
- Self-funding from the  
Functional Ecology  
Laboratory's Resources              Investigating the Relationship Between Floral Traits and Pollinator Composition and Diversity in a Central Anatolian Steppe Community
- Self-funding from the  
Functional Ecology  
Laboratory's Resources              Effects of Habitat and Methodological Variations on Ground-dwelling Insect Community: A Case Study from Hacettepe University Beytepe Campus

## FIELDWORKS

10/20/2024- 11/04/2024	<p>Determining the status of resilience/resistance of woody plants in different vegetation types on Bozcaada and Gökçeada</p> <p><u>Methods:</u> Quadrat sampling, observation of plant diversity and abundance, Braun-Blanquet survey method, measurement of plant length, measurements of plant functional characters which are related to resilience and resistance (Leaf area, leaf thickness, specific leaf area (SLA), capability of leaf water content etc.).</p> <p><u>Location:</u> Gökçeada and Bozcaada/Çanakkale/Türkiye</p>
09/17/2024 09/19/2024  09/26/2024 10/03/2024 10/10/2024 17/10/2024	<p><u>Project:</u> Effects of Habitat and Methodological Variations on Ground-dwelling Insect Community: A Case Study from Hacettepe University Beytepe Campus</p> <p><u>Method:</u> Insect sampling by using pitfall traps.</p>
06/29/2024  07/03/2024  07/08/2024  07/10/2024  07/12/2024 07/13/2024  07/15/2024 07/16/2024  08/06/2024	<p><u>Project:</u> Investigating the Relationship Between Floral Traits and Pollinator Composition and Diversity in a Central Anatolian Steppe Community</p> <p><u>Methods:</u> Measurements of several floral functional traits (petal length, petal area, floral width, plant height etc.), pollinator observation and sampling.</p> <p><u>Location:</u> Ankara, Türkiye</p>
06/12/2024 06/13/2024  06/15/2024 06/16/2024  06/26/2024 06/27/2024	<p><b>Second fieldwork season for master's thesis project</b></p> <p><u>Project:</u> Comparison of pollinator insect diversity in common and rare plant species growing in marl habitats via eDNA metabarcoding</p> <p><u>Method:</u> Flower sampling from plant species that distribute in marly steppes, insect pollinator observation and sampling.</p> <p><u>Location:</u> Eskişehir, Türkiye</p>
05/29/2024 06/01/2024  06/04/2024  06/20/2024 06/21/2024 06/22/2024	<p>Fieldworks for comprehensive research about <b>plant aboveground and belowground functional traits</b> and their interaction with each other in Anatolian steppes that have different characteristics.</p>

10/02/2023- 10/07/2023	<p>Fieldwork for a project that collaborated with Izmir Metropolitan Municipality</p> <p><u>Project:</u> Ecological assessment of forests and scrublands exposed to fire in Izmir and determination of ecosystem restoration levels</p> <p><u>Location:</u> Cesme, Izmir (Turkiye / Mediterranean ecosystem)</p> <p><u>Methods:</u> Quadrat sampling, observation of plant diversity and abundance, Braun-Blanquet survey method, measurement of plant length, measurements of plant functional characters which are related to flammability.</p>
08/08/2023	<p>Seed sampling from plant species of Central Anatolian steppe</p> <p><u>Project:</u> Investigating the possible effects of climate change on the Central Anatolian steppe plants with physio-ecological approaches (TUBITAK 1001)</p> <p><u>Location:</u> Kırıkkale, Kırşehir, Nevşehir, Nigde (Turkiye)</p>
07/10/2023  07/15/2023	<p><b>Fieldwork for master's thesis project</b></p> <p><u>Project:</u> Comparison of pollinator insect diversity in common and rare plant species growing in marl habitats via eDNA metabarcoding</p> <p><u>Method:</u> Flower sampling from plant species that distribute in marly steppes.</p> <p><u>Location:</u> Eskisehir, Turkiye</p>
06/26/2022 06/27/2022  08/05/2022  09/17/2022 09/18/2022  10/22/2022 10/23/2022  04/13/2023  05/20/2023 05/21/2023  06/24/2023	<p>Insect sampling to obtain biodiversity of different habitats that are found in nearly a cave</p> <p><u>Project:</u> Climate effects on activity patterns and trophic interactions of <i>Myotis myotis</i> (Greater mouse-eared bat)</p> <p><u>Method:</u> Insect sampling by using pitfall traps.</p> <p><u>Location:</u> Cankırı, Turkiye</p>
09/29/2022  10/01/2022	<p>Fieldwork for conservation of marly and gypsum habitats in Central Anatolian steppes (Nature Research Society)</p> <p><u>Method:</u> Soil sampling.</p> <p><u>Location:</u> Sivrihisar, Eskisehir</p>

## SEMINAR

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- 1st International Forensic Biology & Genetics Congress (November 27-28, 2014; Ankara/Turkiye)
- 1st International Congress And Workshop of Forensic Toxicology (November 29-30, 2014; Ankara/Turkiye)
- International Congress of Anthropological Sciences – ICAS2015 (April 9-11, 2015; Ankara/Turkiye)
- International ITU Molecular Biology And Genetics Student Congress'15 (October 2-4, 2015; Istanbul/Turkiye)
- International Cofactor Life Sciences Congress (ICLS) (November 21-22, 2015; Istanbul/Turkiye)
- XII IUGEN International Molecular Biology and Genetics Students' Winter School (March 6-8, 2015; Istanbul/Turkiye) – **ORGANIZATION COMMITTEE**
- XIII IUGEN International Molecular Biology and Genetics Students' Winter School (March 4-6, 2016; Istanbul/Turkiye) – **ORGANIZATION COMMITTEE**
- XIV IUGEN International Molecular Biology and Genetics Students' Winter School (March 3-5, 2017; Istanbul/Turkiye) – **ORGANIZATION COMMITTEE**
- Ecology and Evolutionary Biology Symposium- EEBST 2023 (July 17-19, 2023; İstanbul University, İstanbul, Türkiye)
- Charette of Conservation of Pollinator Diversity for Enhanced Climate Change Resilience (ICARDA Project of Agriculture with Alternative Pollinators) (04/26/2023; Ankara/Turkiye)
- Ecology and Evolutionary Biology Symposium- EEBST 2024 (07/23-25/2024; Çanakkale On Sekiz Mart University, Çanakkale, Türkiye)
- Evolutionary Genomics Summer School (07/29-08/02/2024; Ankara/Turkiye)

## REFERENCES

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| Prof. Dr. Çağatay Tavşanoğlu   | Hacettepe University, Department of Biology, Division of Ecology<br><br>E-mail: ctavsan@hacettepe.edu.tr                              |
| Prof. Dr. Emre Keskin          | Ankara University, Evolutionary Genetics Laboratory, Department of Fisheries and Aquaculture<br><br>E-mail: Emre.Keskin@ankara.edu.tr |
| Asst. Prof. Dr. Çağatay Tarhan | Istanbul University, Department of Molecular Biology and Genetics<br><br>E-mail: cagatay.tarhan@istanbul.edu.tr                       |