

# Gülsemi KIRGIL

## PERSONAL

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## EDUCATION

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2026 – present



Philosophiae Doctor (Ph.D.) in **Biology (Ecology)**, Hacettepe University, Graduate School of Science and Engineering, Ankara, Türkiye.

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

Supervisor: Prof. Dr. Çağatay Tavşanoğlu.

2022 – 2025



Master of Science (M.Sc.) in **Biology (Ecology)**, Hacettepe University, Graduate School of Science and Engineering, Ankara, Türkiye (CGPA: 3.85/4.00).

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

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

**The M.Sc. thesis**: *Patterns of Insect Pollinator Diversity in Rare and Common Plants Growing in A Marl Steppe Habitat in Central Anatolia* (in Turkish, 149 pages; 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

## WORK EXPERIENCES

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2018-2021

Bilim ve Gelecek (*Science and Future*) - **Scientific journalism / Editor**



## INTERNSHIPS & RESEARCH EXPERIENCE

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03/14/2022 - 10/18/2022

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



MIDDLE EAST TECHNICAL UNIVERSITY

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/>

## SCHOLARSHIPS

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11/26/2024 – 05/30/2025

Scholarship student in TUBITAK 1002 project (Revealing the resource-use strategies and aboveground and belowground functional trait structure in a marl 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*)

## MEMBERSHIPS

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2023- present

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

## ADMINISTRATIVE EXPERIENCES

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June 2023 - present

**Coordinator of Functional Ecology Laboratory**, Department of Biology, Hacettepe University.

July 2025 - present

**Secretary General**, Ecology and Evolutionary Biology Society

## PROJECTS

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- TUBITAK 1001  
(Scholarship student)  
(2022-2025)  
  
Project name: Climate effects on activity patterns and trophic interactions of *Myotis myotis* (Greater mouse-eared bat)  
  
Project code: 121Z307  
  
Fieldwork participation including insect sampling with pitfall traps; preparation of Coleopteran collections; statistical analyses in R (Shannon diversity index, NMDS, species richness analyses).
- TUBITAK 1002  
**(The master's thesis project)**  
(2024-2025)  
  
Project name: Comparison of pollinator insect diversity in common and rare plant species growing in marl habitats via eDNA metabarcoding  
  
Project code: 124Z153  
  
Project design and preparation of project proposals; insect sampling using aerial nets; collection of plant material for molecular analyses; eDNA metabarcoding and next-generation sequencing (NGS); bioinformatics; insect identification (Diptera, Coleoptera, Lepidoptera); statistical analyses in R (Shannon diversity index, NMDS, species richness analyses, bipartite ecological network analysis).
- Self-funding from the  
Functional Ecology  
Laboratory's Resources  
(2024)  
  
Investigating the Relationship Between Floral Traits and Pollinator Composition and Diversity in a Central Anatolian Steppe Community  
  
Project design and preparation of project workflows; insect sampling using aerial nets; observation and measurement of floral functional traits (petal area, petal length, floral width, plant height, determination of petal color via UV spectrophotometer); insect identification (Diptera, Coleoptera, Lepidoptera); statistical analyses in R.
- Self-funding from the  
Functional Ecology  
Laboratory's Resources  
(2024)  
  
Effects of Habitat and Methodological Variations on Ground-dwelling Insect Community: A Case Study from Hacettepe University Beytepe Campus  
  
Project design; fieldwork coordination; insect sampling using pitfall traps; preparation of insect collections; statistical analyses in R (Shannon diversity index, NMDS, species richness analyses).
- Self-funding from the  
Functional Ecology  
Laboratory's Resources  
(2025)  
  
Monitoring *Ailanthus* sp. at Hacettepe University Beytepe Campus

## FIELDWORK

08/07/2025- 09/08/2025	Monitoring <i>Ailanthus</i> sp. at Hacettepe University Beytepe Campus
10/20/2024- 11/04/2024	<p>Determining the status of resilience/resistence of woody plants in different vegetation types on Bozcaada and Gokçeada</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> Gokceada and Bozcaada/Çanakkale/Turkiye</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, Turkiye</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 the 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> Eskisehir, Turkiye</p>
05/29/2024 06/01/2024  06/04/2024  06/20/2024 06/21/2024 06/22/2024 09/14/2024 09/15/2024	<p>Fieldwork 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 the 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>

## 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/Turkiye)
- Oral presentation on “*Plant Distribution Affects the Community Structure of Insect Pollinators*” at **11<sup>th</sup> Ecology and Evolutionary Biology Symposium (EEBST 2025)**. (11 July 2025; Hacettepe University, Ankara/Turkiye)
- Poster presentation on “*Afforestation Alters Epigeic Beetle Community in Central Anatolian Steppes*” at **11<sup>th</sup> Ecology and Evolutionary Biology Symposium (EEBST 2025)**. (9-11 July 2025; Hacettepe University, Ankara/Turkiye)

## ACADEMIC COURSES, WORKSHOPS AND CERTIFICATES

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- 1<sup>st</sup> International Forensic Biology & Genetics Congress (November 27-28, 2014; Ankara/Turkiye)
- 1<sup>st</sup> 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, Turkiye)
- 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, Turkiye)
- Evolutionary Genomics Summer School (07/29-08/02/2024; Ankara/Turkiye)
- Ecology and Evolutionary Biology Symposium- EEBST 2025 (07/9-11/2025; Hacettepe University, Ankara/Turkiye)

## HOBBIES & INTERESTS

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2015 - 2019

Istanbul University, Faculty of Science, Theatre Club

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

## REFERENCES

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Prof. Dr. Çağatay Tavşanoğlu Division of Ecology, Hacettepe University, Department of Biology.

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Prof. Dr. Emre Keskin Evolutionary Genetics Laboratory, Department of Fisheries and Aquaculture, Ankara University.

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Asst. Prof. Dr. Çağatay Tarhan Department of Molecular Biology and Genetics, Istanbul University.

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