

# Georgia

From Lakes to Gardens: Citizen Science Boosts Genomic Awareness in the heart of the Caucasus

## Lead researchers

David Tarkhnishvili and Jagoba Malumbres-Olarte

## About the hotspot

Georgia is situated in the heart of the **Caucasus**, where wetlands, lakes, forests, and rocky slopes support numerous endemic and threatened species. Climate change is already reshaping these ecosystems, making locally grounded monitoring and conservation urgent. Yet Georgia remains a genomic blind spot: many species on the national IUCN Red List still lack DNA barcodes and reference genomes, limiting evidence-based management and adaptation planning.



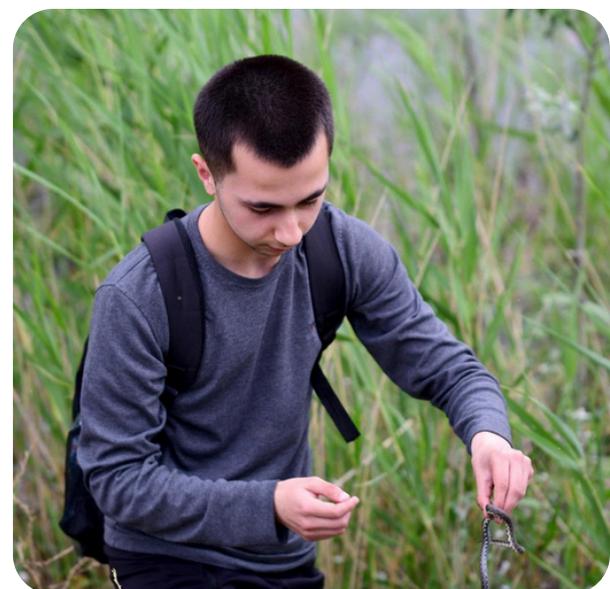
## Did You Know?

Georgia lies within the Greater Black Sea ecoregion (a WWF “priority place”) and overlaps two global biodiversity hotspots recognised by Conservation International: the Caucasus and Iran–Anatolian hotspots.



In June 2024, the **GEORBLITZ** team ran two citizen-science BioBlitzes to kick-start biodiversity recording and genomics awareness: Lisi Lake (Tbilisi) and the Kutaisi Botanical Garden.

Local community members teamed up with experts and students from Ilia State University (ISU) for hands-on sessions. Participants practiced standard field methods, net sweeping, foliage beating, hand collection, and worked in three taxon-focused groups. Specimens were labelled in ethanol for observation, with material set aside for future genetic analyses. They were examined under microscopes under guidance from specialists. On-site educational stands with preserved and live specimens sparked conversations about how DNA barcodes and reference genomes inform species assessment, conservation, and restoration.



Field observations spanned reptiles (e.g., dice snake, spur-thighed tortoise), amphibians (marsh frog, green toad), arthropods (house centipede, Alpiscorpius scorpions), birds (from reed warblers and swifts to orioles and jays), and even mammals (Caucasian squirrel), underscoring the conservation value of urban-adjacent green spaces. The initiative also reached a wider audience through Georgian national TV, which reported live from the Lisi Lake event.



Some of the species spotted during the GEORBLITZ activities.



# ბიობლიცი BioBlitz ქუთაისი



ქუთაისის ბოტანიკურ ბაღში

2024 წლის 14 ივნისი  
11:00-17:00

პირველი სესია 12:00 საათზე  
მეორე სესია 15:00 საათზე



## Explore observations:

- [Lisi Lake iNaturalist project](#):
- [Kutaisi Botanical Garden iNaturalist project](#)
- Media: Live TV report (Lisi Lake):  
<https://www.facebook.com/share/v/TVwW31FwVncjS71R/?mibextid=SphRi8>

Photos by the School of Natural Sciences and Medicine, Ilia State University; Giorgi Iankoshvili.



Biodiversity Genomics Europe  
BiodiversityGenomics.eu



Co-funded by the European Union



UK Research and Innovator



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra