

6. Biodiversity Hotspots & how to study them



The European Reference Genome Atlas (ERGA) and the European node of the International Barcode of Life (iBOL Europe), two international communities of scientists brought together under the Biodiversity Genomics Europe Project, are joining forces for a series of blog posts that explore the fascinating world of Biodiversity Genomics and the intersection of their communities.



**Biodiversity
Genomics
Europe**

BiodiversityGenomics.eu

What is a Biodiversity Hotspot? 🔥

Imagine a small region of Earth filled with plants and animals found nowhere else, then imagine that same region under serious threat. That is a **biodiversity hotspot**. Because these places hold so much unique life in such a small area, they are at the top of the global "save it now" list.

Europe has several of these treasure zones. Through a partnership led by Spain's national research council (CSIC), the Biodiversity Genomics Europe project has picked six hotspot countries for a special mission about reading the DNA of some of their species and making that information available for society, science, and conservation.



the balkans and the mediterranean sea are examples of biodiversity rich regions in Europe.



What is a BioBlitz? ⚡

To collect those species' DNA, scientists run **BioBlitzes**, day-long nature expeditions where experts and volunteers team up. Everyone goes out searching for species for two kinds of DNA tests: DNA barcodes that tell us who lives in the area right now, and Reference genomes showing how they survived, adapted, or struggled. Together they help local people, park managers, and scientists keep Europe's 'hot biodiversity spots' alive and thriving.



BIOBLITZ IN THE MADEIRA ISLAND



Within BGE, BioBlitzes were organized across 6 European hotspots in order to collect species for DNA barcoding and genome sequencing.

[Learn more about Barcoding and Reference Genomes >](#)

Croatia

Genomes in the dark - collecting in a hidden biodiversity hotspot

Lead researcher

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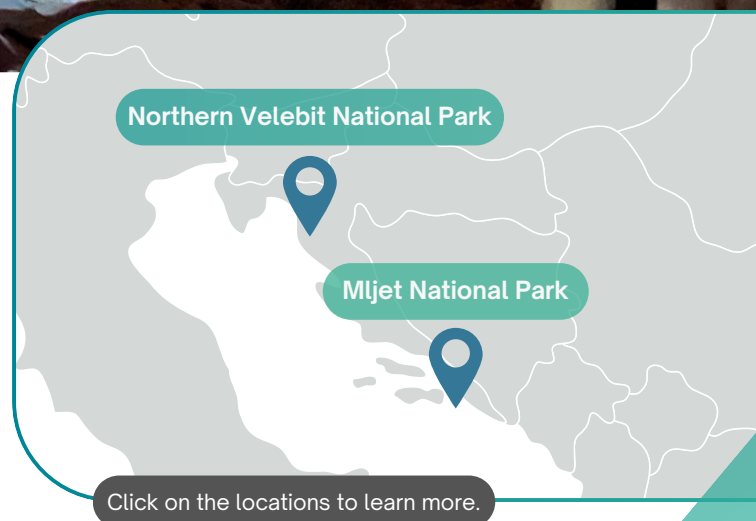


The karst caves of Croatia's Dinaric Mountains hide one of the richest underground worlds on the planet and gave birth to cave biology as a science. Life down there evolved in steady darkness and constant temperatures, so even a small warming could cause a catastrophe. Worse, cave creatures cannot leave their underground houses. There's no "moving uphill" when you live under it. This means that we urgently need to study these species' DNA and protect their unique habitat.



So far, 900+ cave species have been found in the Dinarides, with over 150 new ones reported in Croatia since 2002.

There is still a lot to discover!



Who participated?



Biospeleologists



National Park Staff



School teachers



University Students



High School Students



Elementary School Students

CROATIA

What happened?

In April 2024, at the island caves in Mljet National Park and in October 2024, at the Cerovac caves in Velebit Nature Park, biospeleologists, park rangers, students, and local kids joined forces. They learned how to spot beetles and amphipods, label each find, and store everything for genomic analysis in the lab. In two weekends, they secured 40+ cave species for barcoding and full genome reading.

Why does it matter?

Park staff now know how to freeze samples for future studies, school groups saw blind cave animals live for the first time, and both parks have decided to promote an annual “Week of Biospeleology.” The DNA samples sent to the lab will tell scientists which species are most at risk, and how best to save them. Croatia’s BioBlitz shows that when locals, students, and DNA researchers team up, even life hidden deep in the dark gets a fighting chance.



Learn more about the concept of Biodiversity Genomics >



Photo gallery

Photos by Martina Pavlek, Iva Cupic, Jana Bedek, Tin Rozman, Alen Kirin, Nikolina Kuharic

