

Exploring Molecular Biodiversity

Input data sources

☒ ENA

☐ GBIF

Country of interest:

Greece

Dates of interest:

2020-05-01

to

2025-06-21

Scientific name (optional)

Fagus

Kingdom (optional)

Load Data

Home Overview Table Map

Welcome

Welcome to Odyssey, an interactive

Who is the app intended for?

The app provides a user-friendly interface

Methodology

The current app prototype queries ENA and GBIF

It provides tools for data exploration and visualization

The modular design ensures flexibility and scalability

Contribution

Your input is invaluable - whether it's a new record or a correction

Feel free to open a [GitHub issue](#) or contact the developers

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Searching for
ENA records
between
2020-2025
about the
beech tree,
Fagus sp.



Fagus sylvatica

ENA

accession	first_public	country	altitude	host	host_tax_id	isolation_source	scientific_name	tax_id	lat	long	tax_division2
OR936132	2023-12-25	Greece: Voras, NW					Fagus sylvatica	28930	39.0742	21.8243	Plantae
OR936129	2023-12-25	Greece: Paiko, NW					Fagus sylvatica	28930	39.0742	21.8243	Plantae

 Download as CSV

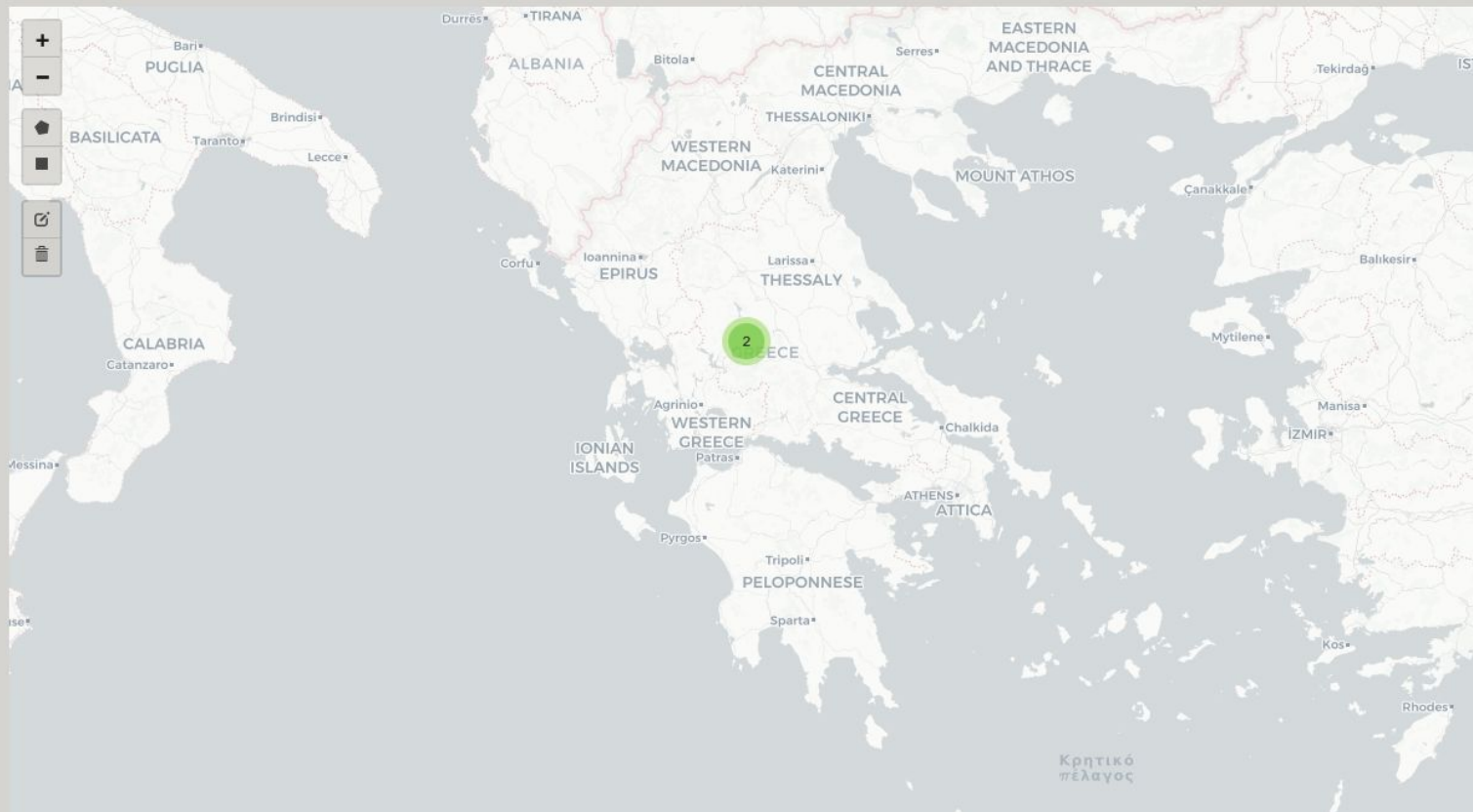
```
ID OR936132; SV 1; circular; genomic DNA; STD; PLN; 158449 BP.
XX
AC OR936132;
XX
DT 25-DEC-2023 (Rel. 144, Created)
DT 26-DEC-2023 (Rel. 144, Last updated, Version 1)
XX
DE Fagus sylvatica chloroplast, complete genome.
XX
KW .
XX
OS Fagus sylvatica (European beech)
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC Spermatophyta; Magnoliopsida; eudicotyledons; Gunneridae; Pentapetales;
OC rosids; fabids; Fagales; Fagaceae; Fagus.
OG Plastid:chloroplast
XX
```

Only two records, which are full plastomes, without any geographical coordinates

Draw a rectangle or polygon on the map, then click Load Data.

Clear Area Filter

No area filter selected 2 points have estimated coordinates (2 Greece)



Since there are no coordinates, these records are placed in the center of Greece

ENA

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XX
```

However, we can find the locations of these samples (under “country”) on Mt. Paiko and Mt. Voras, two mountains that form one of the most important glacial refugia in Europe

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Plantae

Load Data

Table options

☐ Show filter

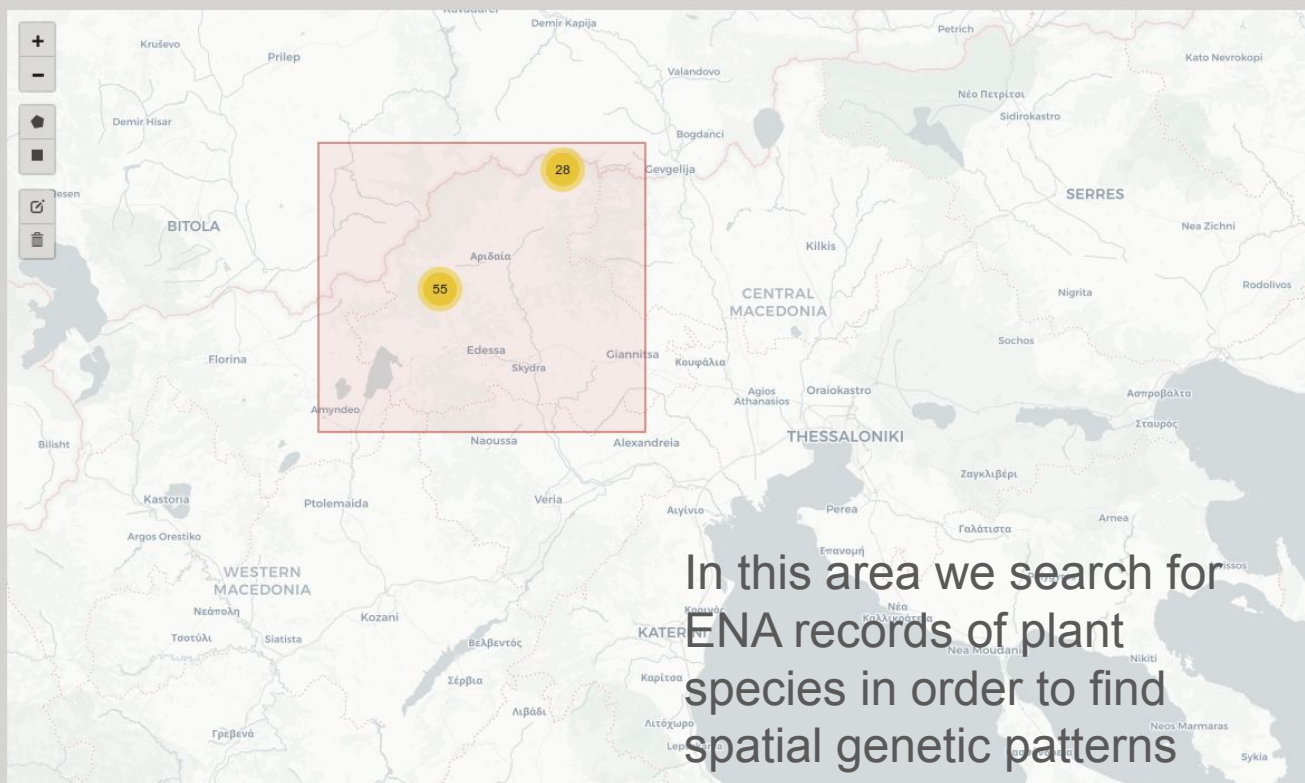
Group by

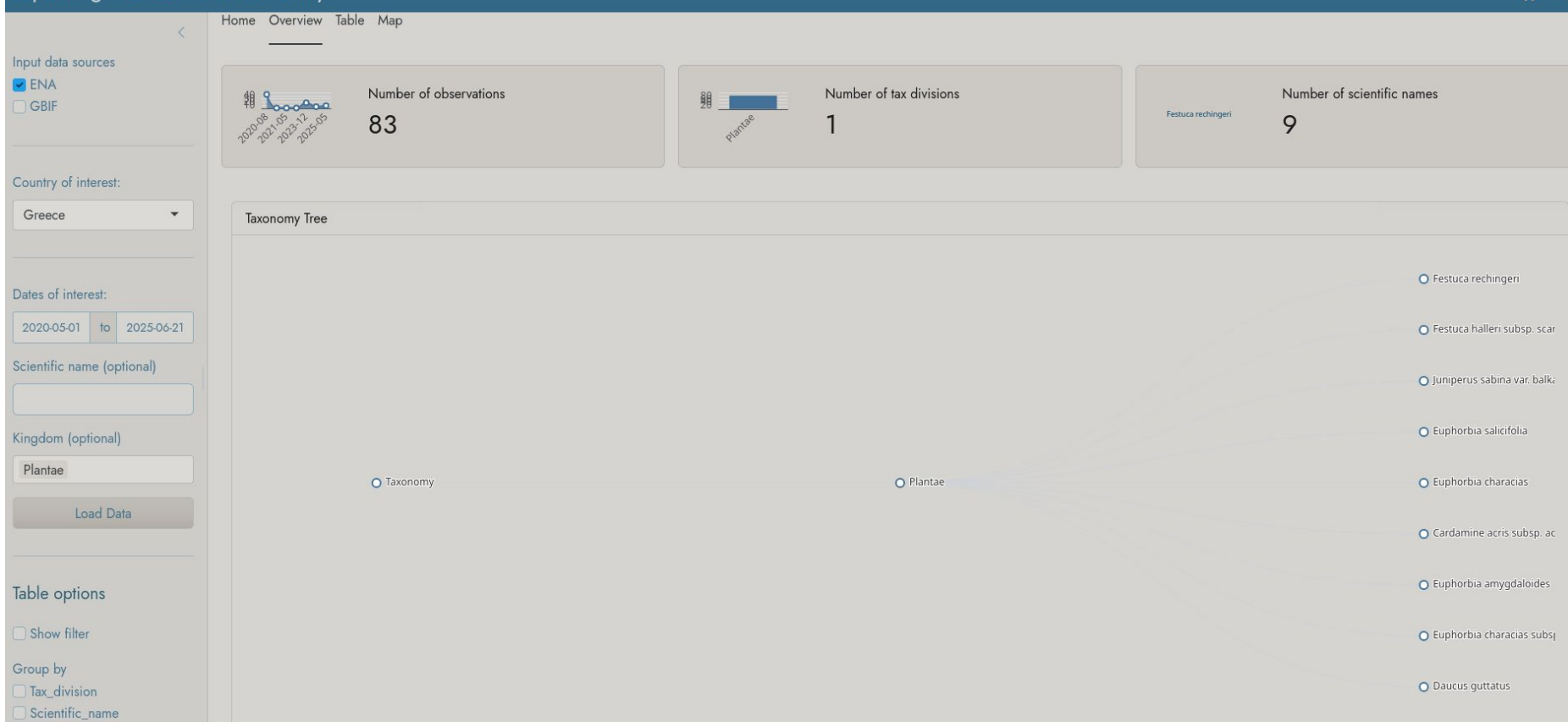
☐ Tax_division

☐ Scientific_name

☐ Tax1

Draw a rectangle or polygon on the map, then click Load Data. Clear Area Filter Active area: W 21.638, E 22.442, S 40.648, N 41.185 All points use original coordinate





We can select one of the plant species found on the database to further investigate their spatial genetic structure in this area.

ID PP337632; SV 1; linear; genomic DNA; STD; PLN; 726 BP.
XX
AC PP337632;
XX
DT 09-MAY-2025 (Rel. 144, Created)
DT 31-AUG-2025 (Rel. 144, Last updated, Version 4)
XX
DE Festuca halleri subsp. scardica isolate Fb579 trnA-Leu (trnL) gene and
DE trnL-trnF intergenic spacer, partial sequence; chloroplast.
XX



OQ818780; SV 1; linear; genomic DNA; STD; PLN; 644 BP.

OQ818780;

20-DEC-2023 (Rel. 144, Created)
21-DEC-2023 (Rel. 144, Last updated, Version 1)

Juniperus sabina var. balkanensis isolate GR1-3 trnD-trnT intergenic spacer
and tRNA-Thr (trnT) gene, partial sequence; chloroplast.



ID OQ230305; SV 1; linear; genomic DNA; STD; PLN; 1511 BP.
XX
AC OQ230305;
XX
DT 14-JUN-2023 (Rel. 144, Created)
DT 15-JUN-2023 (Rel. 144, Last updated, Version 1)
XX
DE Euphorbia characias isolate 14772 trnT-trnL intergenic spacer, partial
DE sequence; tRNA-Leu (trnL) gene, complete sequence; and trnL-trnF intergenic
DE spacer, partial sequence; plastid.
XX

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Scientific name (optional)

Kingdom (optional)

GBIF basisOfRecord

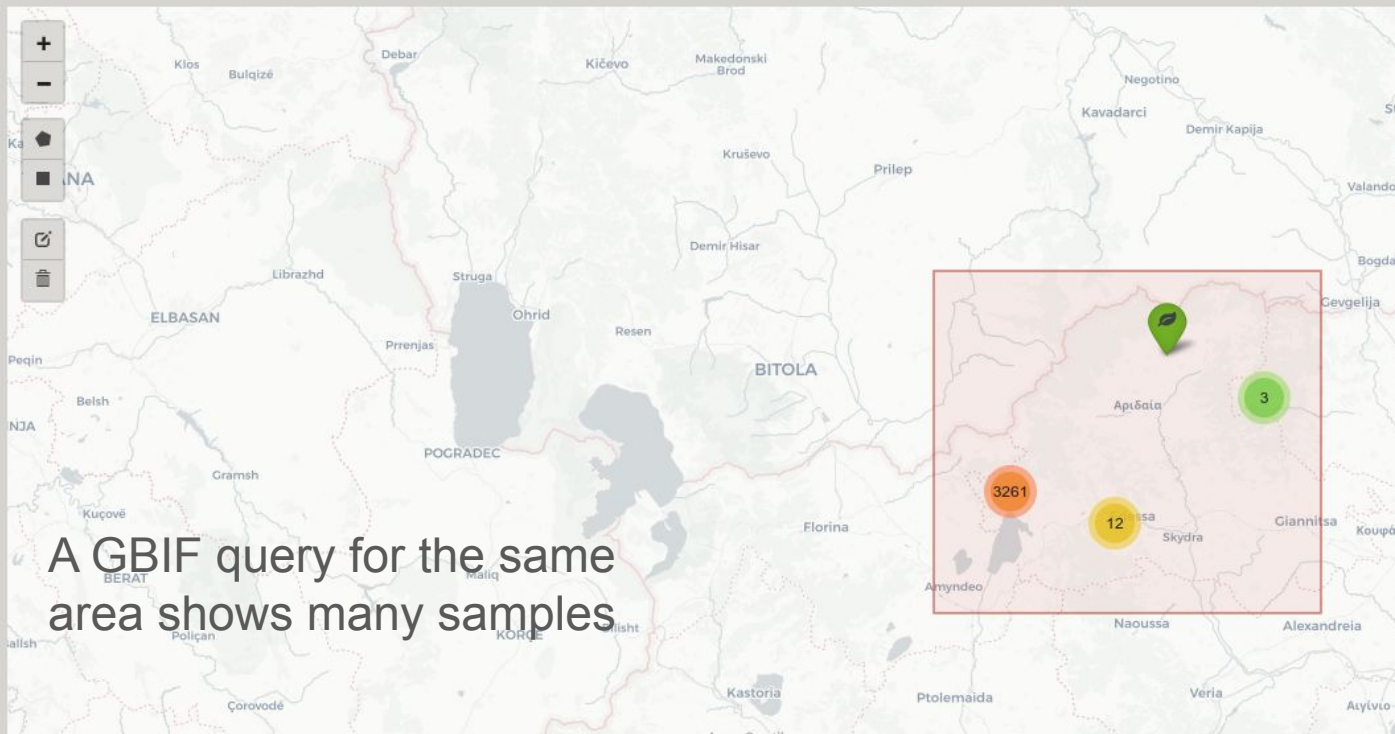
MATERIAL_SAMPLE

Load Data

Draw a rectangle or polygon on the map, then click Load Data.

Clear Area Filter

Active area: W 21.638, E 22.442, S 40.648, N 41.185 All points use o



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MATERIAL_SAMPLE

Load Data

Table options

☐ Show filter

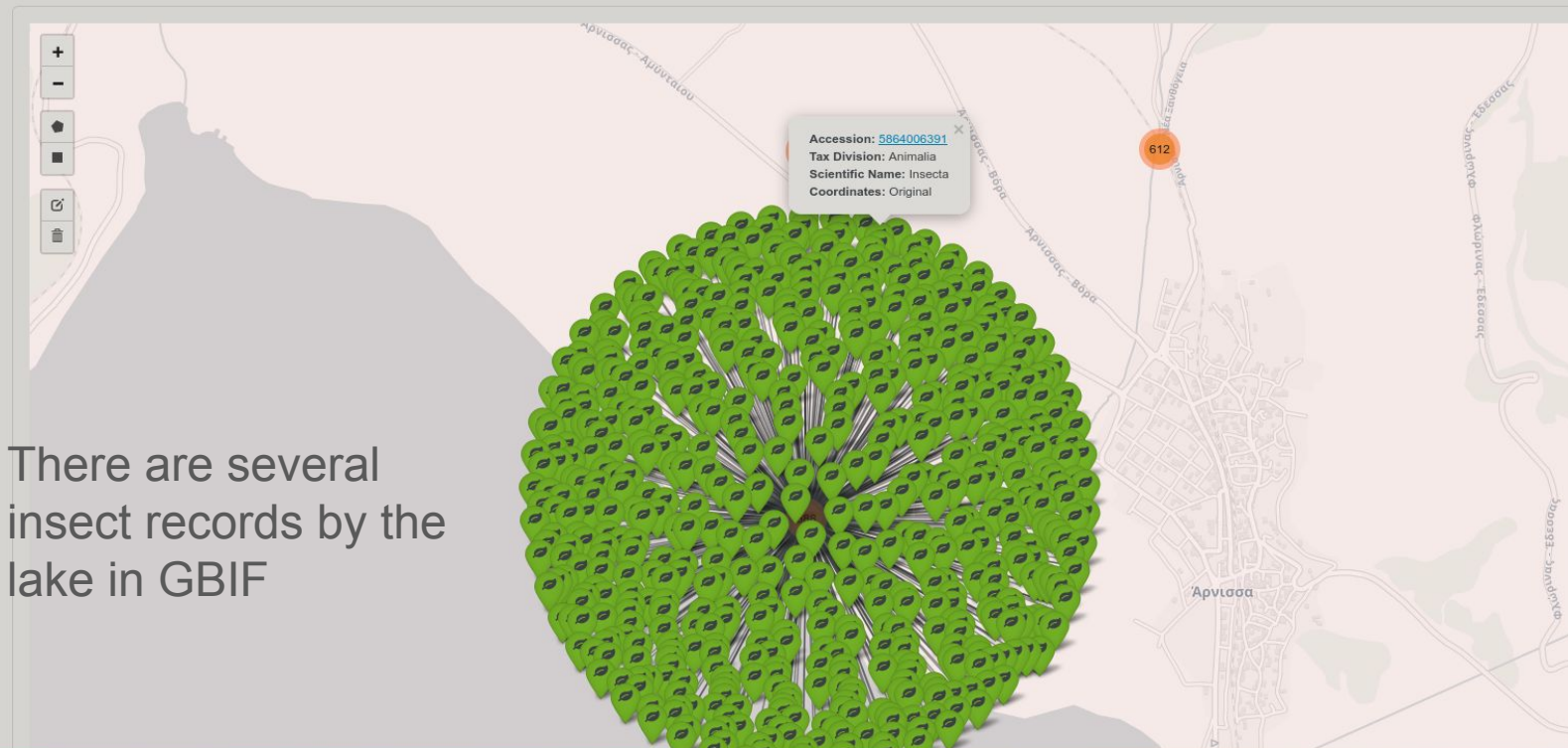
Group by

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Clear Area Filter

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What we can do here:

- Compare different plants on their genetic diversity in specific barcoding regions.
 - Identify spatial patterns and possible evolutionary forces defining these patterns
 - Come up with relevant conservation strategies
- Evaluate specific habitats with the help of GBIF insect records
 - Describe the insect fauna of a glacial refugium and the spatial patterns within the area
 - Evaluate environmental conditions in the habitats and identify threats
 - Conclude with conservation strategies to address these threats