

Czech Republic

Poland



Ukraine

Slovak Republic

**Biodiversity of the Carpathian Region**

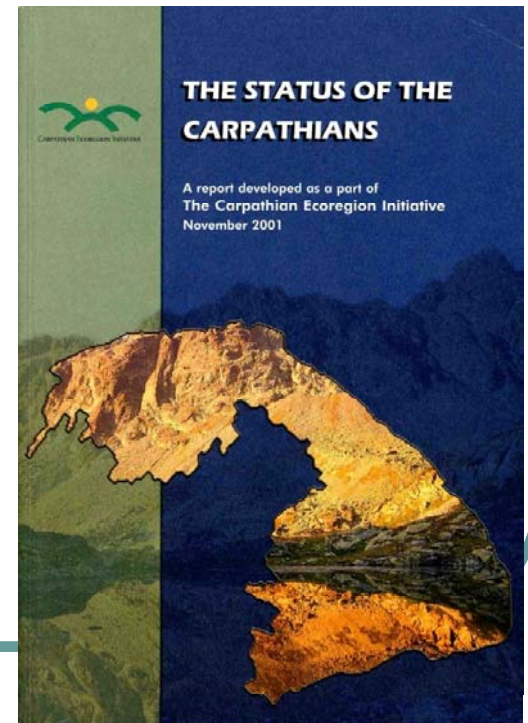
Romania

# The Carpathians' facts

- total area of ca 210,000 km<sup>2</sup>
- an arc extending ca 1,450 km from Bratislava to the Iron Gate
- house of over 480 endemic species
- one of the richest native flora on the European continent (3988 species and subspecies = ca 30% of the total European flora, ratio of the area between the Carpathians and Europe 1:46)
- the landscape shaped by a long tradition of mountain agriculture and shepherding



# The Carpathians' biodiversity – The Status of the Carpathians 2001



# The Status of the Carpathians 2001 - summary

- first comprehensive demonstration of value of the Carpathian
- collection of all relevant biodiversity and socio-economic data from 6 Carpathian countries, excluding Serbia
- organisational structure of the work – 6 country teams all including experts in biodiversity, socio-economics, GIS, communication

# The Status of the Carpathians 2001 – target

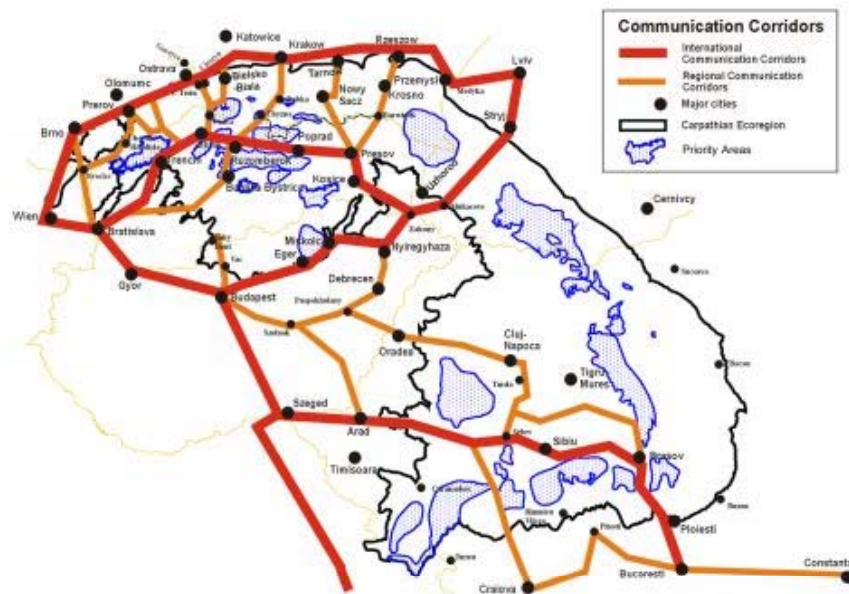
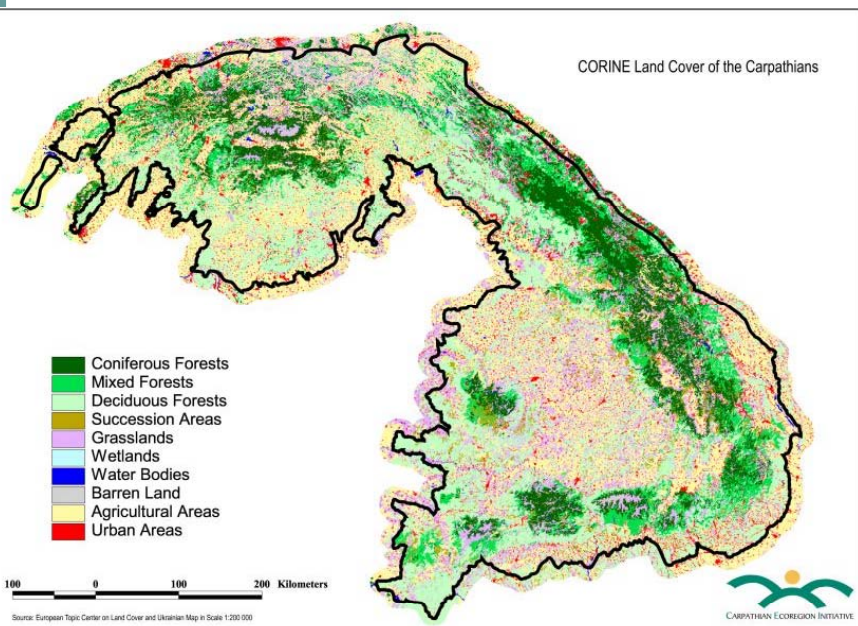
- a vision for Protected Areas in the Carpathians
- priority areas for Biodiversity conservation in the Carpathians
- identify threats to biodiversity
- identify and develop opportunities for conservation of biodiversity and sustainable development

# Data gathering – key biodiversity

- Endemic Plants – List of 486 Carpathian Endemic Vascular Plants
  - 223 taxa of endangered plant species
    - Alliances – 133 Carpathian alliances
    - Fish – 95 species
    - Amphibians and Reptiles – 30 species
    - Birds – 32 CEI focal species
    - Mammals – 67 species

# Data gathering – socio- economic data

- Agriculture – Distribution of arable land (CORINE land cover)
- Transport – Communication corridors



## Data gathering – Socio-Economic data

- Industry and Water Management – Distribution of mining and manufacturing sites
- Tourism – Number of tourists visiting an orographic unit annually

# GIS database – Phase A

**Step 1** – Delineating Focal Species Group Areas

**Step 2** – Evaluation of FSGAs according to threats

**Step 3** – Ranking matrix of FSGA according to biodiversity value and socio-economic impact

## GIS database – Phase B

**Step 1 & 2** – Weighting of importance of FSGs & computing of grid of biodiversity importance

**Step 3** – Delineation of valuable biodiversity areas: Biodiversity Important Areas (BDIAs)

**Step 4 & 5** – Labelling and ranking the BDIAs

**Step 6** – Designation of Ecological corridors

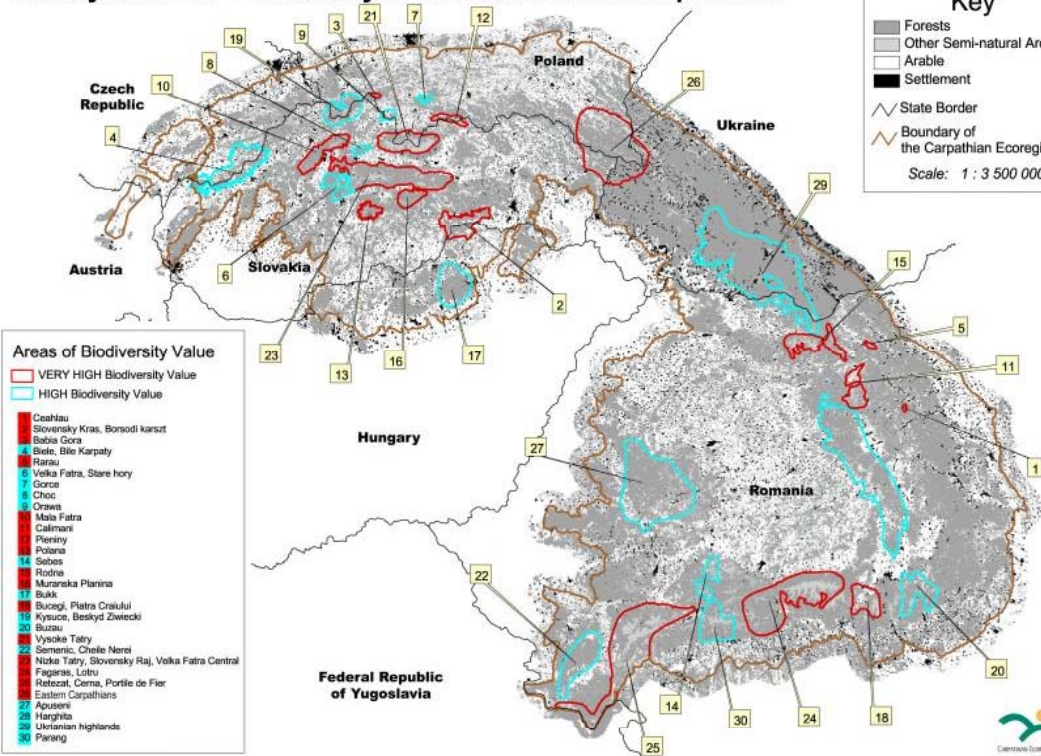
## GIS database – Phase C

**Step 1** – Overlaying the most threatened areas for each FSGA sector with the map of BDIAs

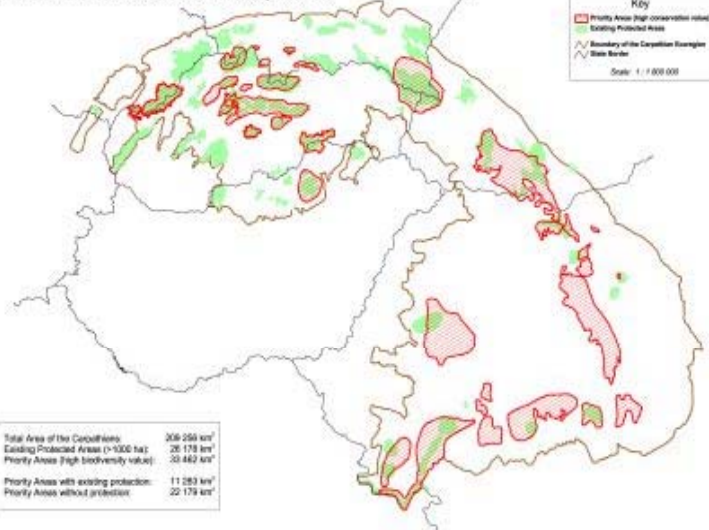
**Step 2** – Ranking matrix for BDIAs and their threats

# The Status of the Carpathians 2001 – outputs

## Priority Areas for Biodiversity Conservation in the Carpathians



A Vision for Protected Areas in the Carpathians



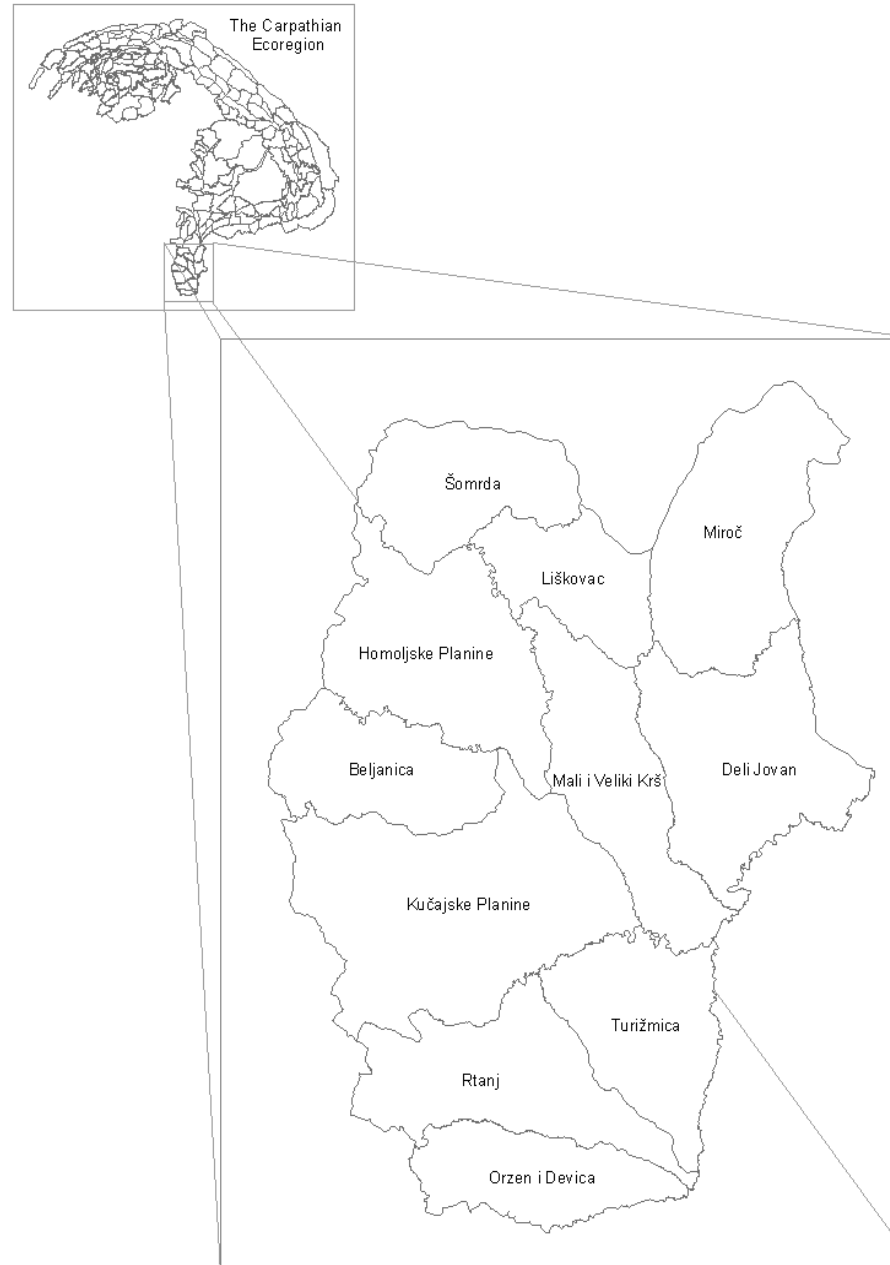
# Development of biodiversity information system in Serbia

## The Carpathians in Serbia

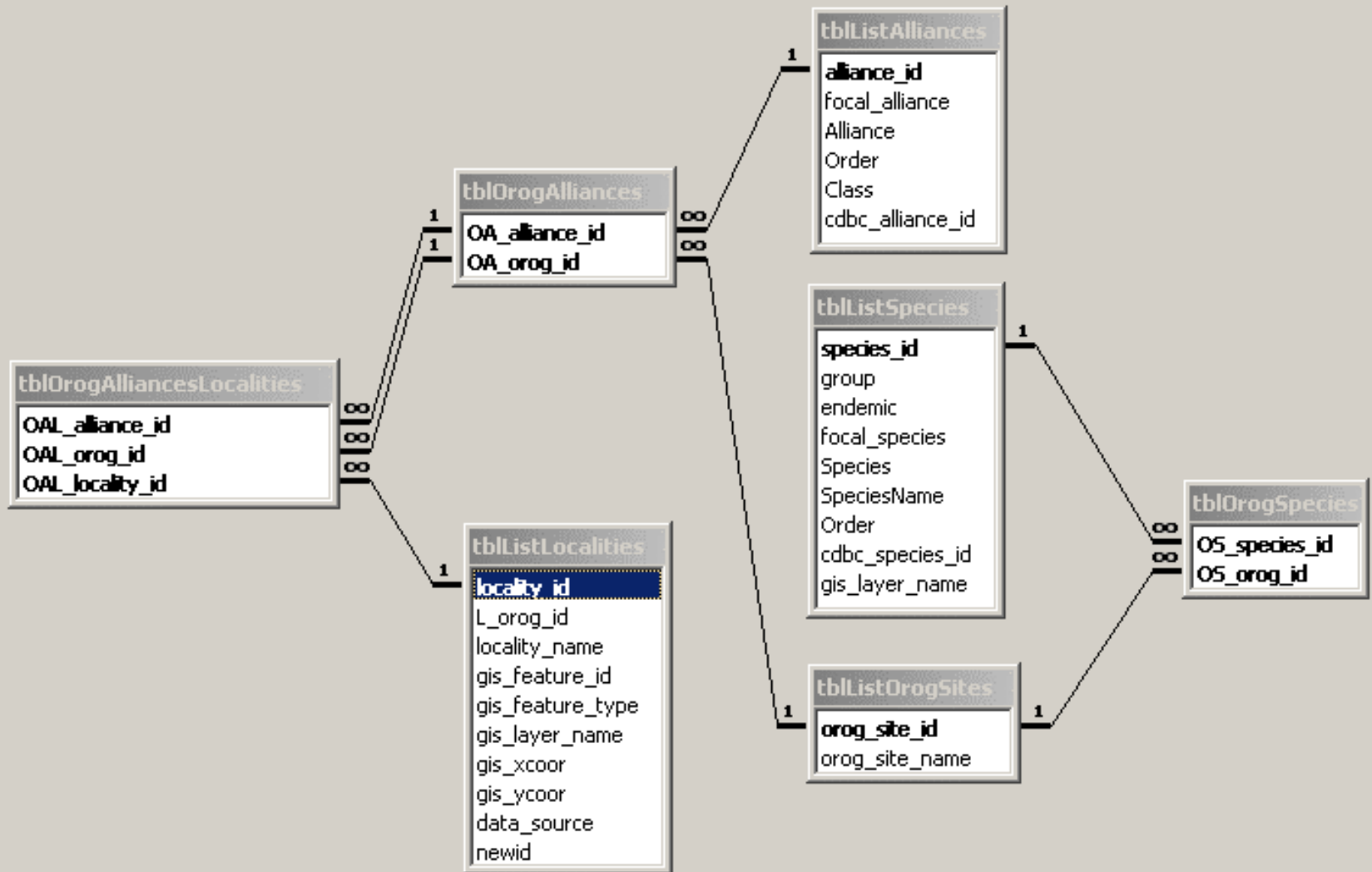
- a natural bridge between Western and Eastern Europe allowing for species migration and genetic exchange
- the project filled the information gap in the knowledge of Carpathian biodiversity

# Development of biodiversity information system in Serbia

## Orographical Units of Serbian Carpathians



# Scheme of the Information System

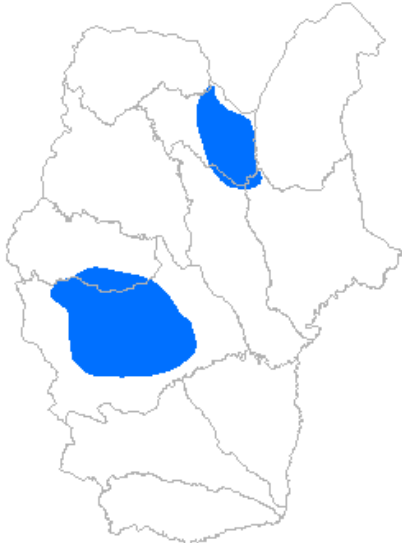


# Summary of the gathered data

Group	Number of focal spec/hab	Number of spec/hab with GIS layer	Total number of spec/hab
Amphibians & reptiles	5	0	6
Birds	6	12	12
Fishes	0	4	5
Invertebrates	0	26	37
Large Carnivores	4	4	4
Other Mammals	3	4	4
Plants (Endemic plants)	0 (0)	22 (7)	71 (37)
Habitats (Alliances)	16	1	48
<b>Total</b>	<b>34</b>	<b>73</b>	<b>187</b>

# Areas of Biodiversity Importance Delineation

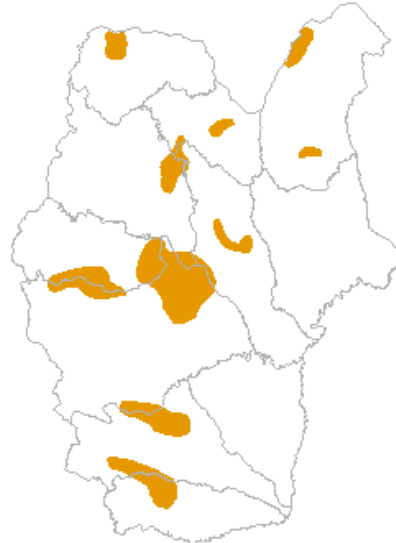
FSGAs of Carnivores



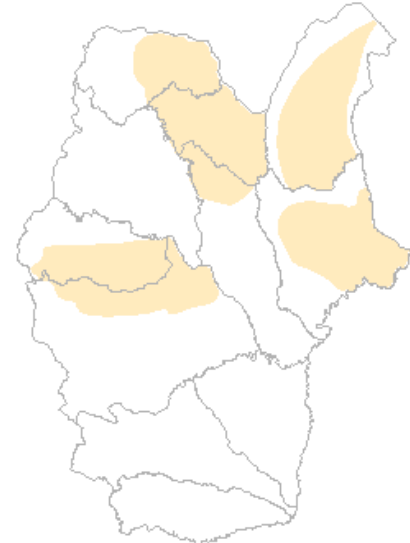
FSGAs of Other mammals



FSGAs of Birds



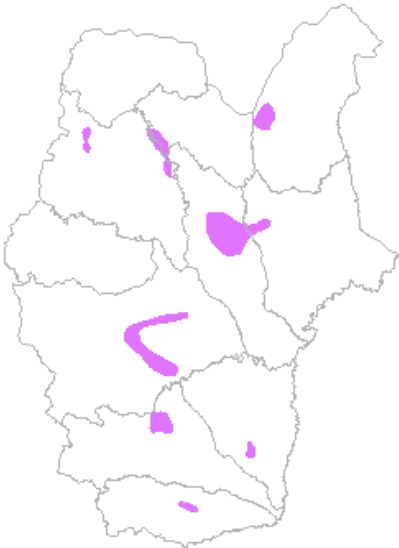
FSGAs of Amphibians and Reptiles



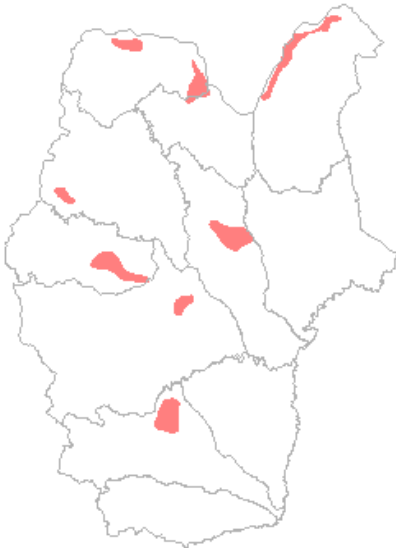
FSGAs of Fish



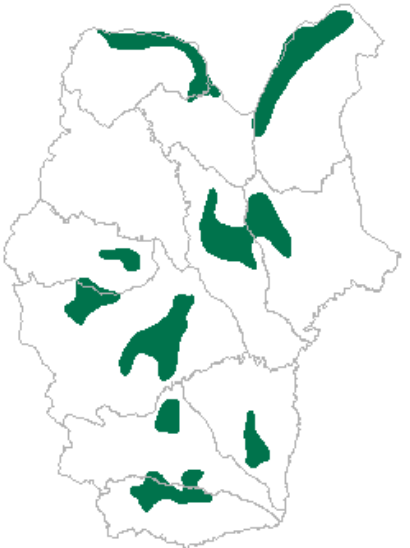
FSGAs of Invertebrates



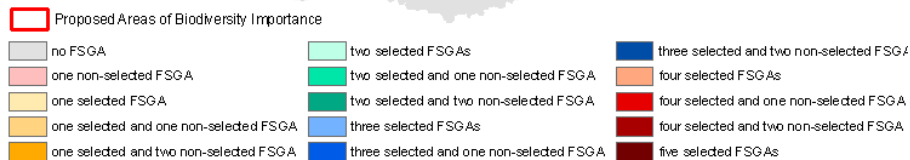
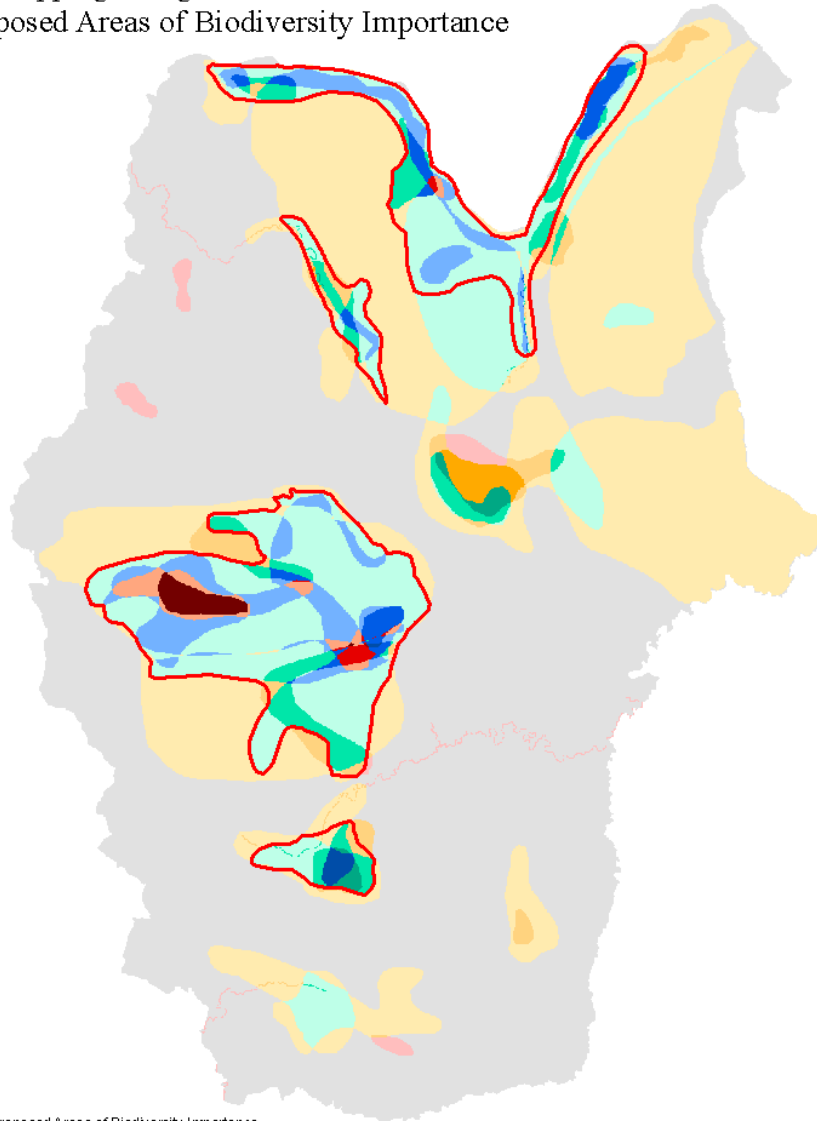
FSGAs of Plants



FSGAs of Habitats (Alliances)



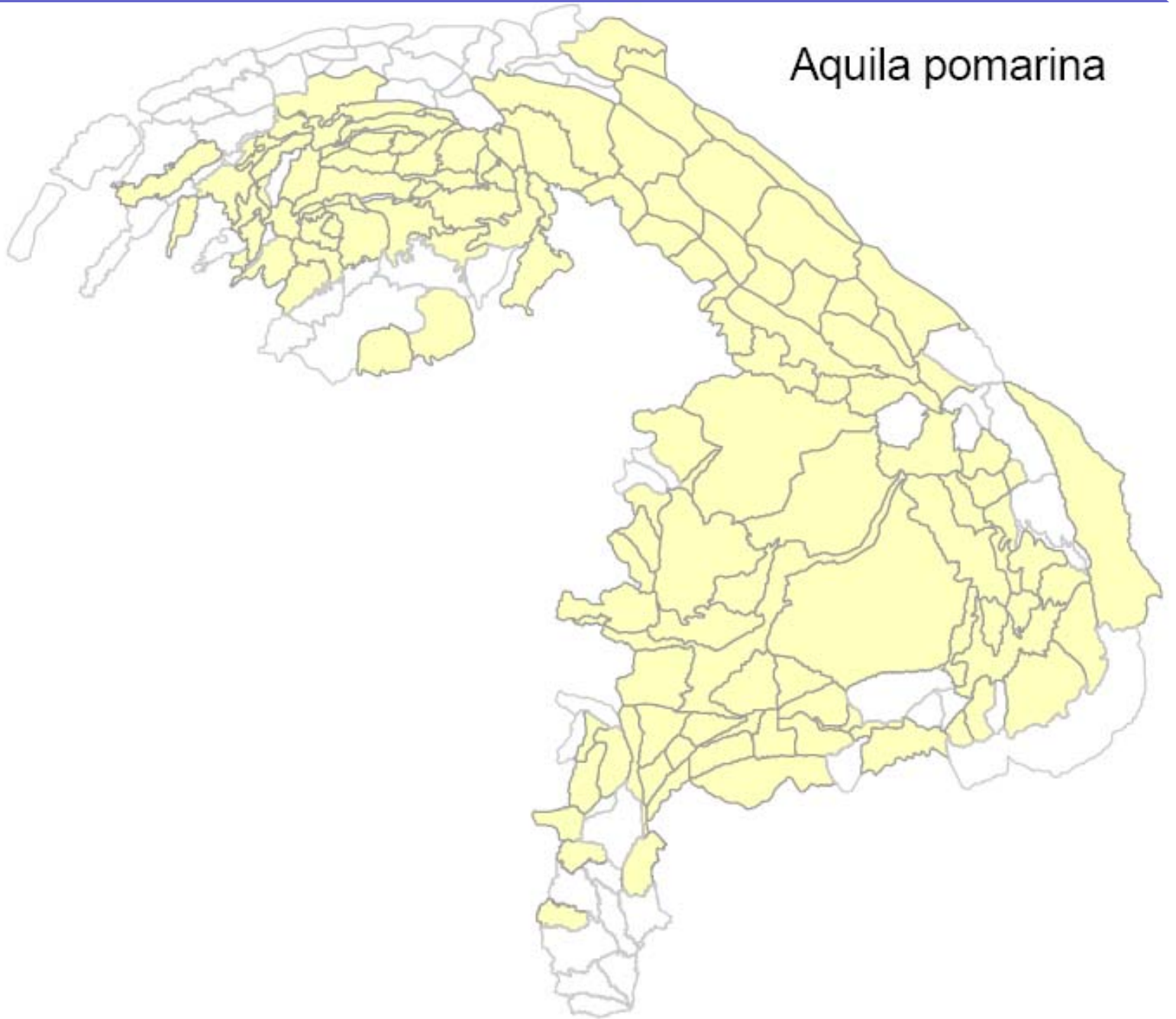
# Overlapping of eight FSGAs and Proposed Areas of Biodiversity Importance



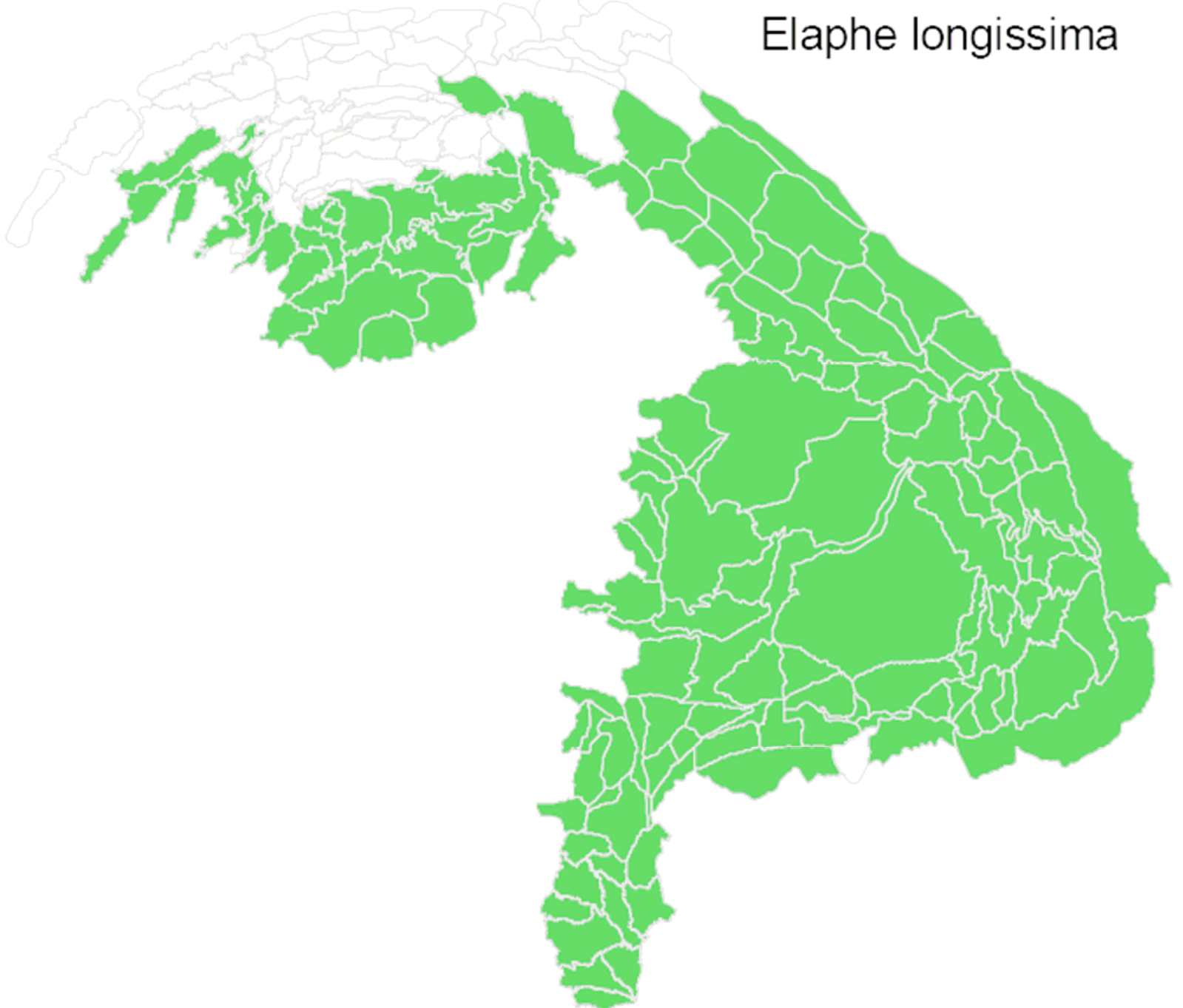
# Areas of Biodiversity Importance of the Carpathian Ecoregion



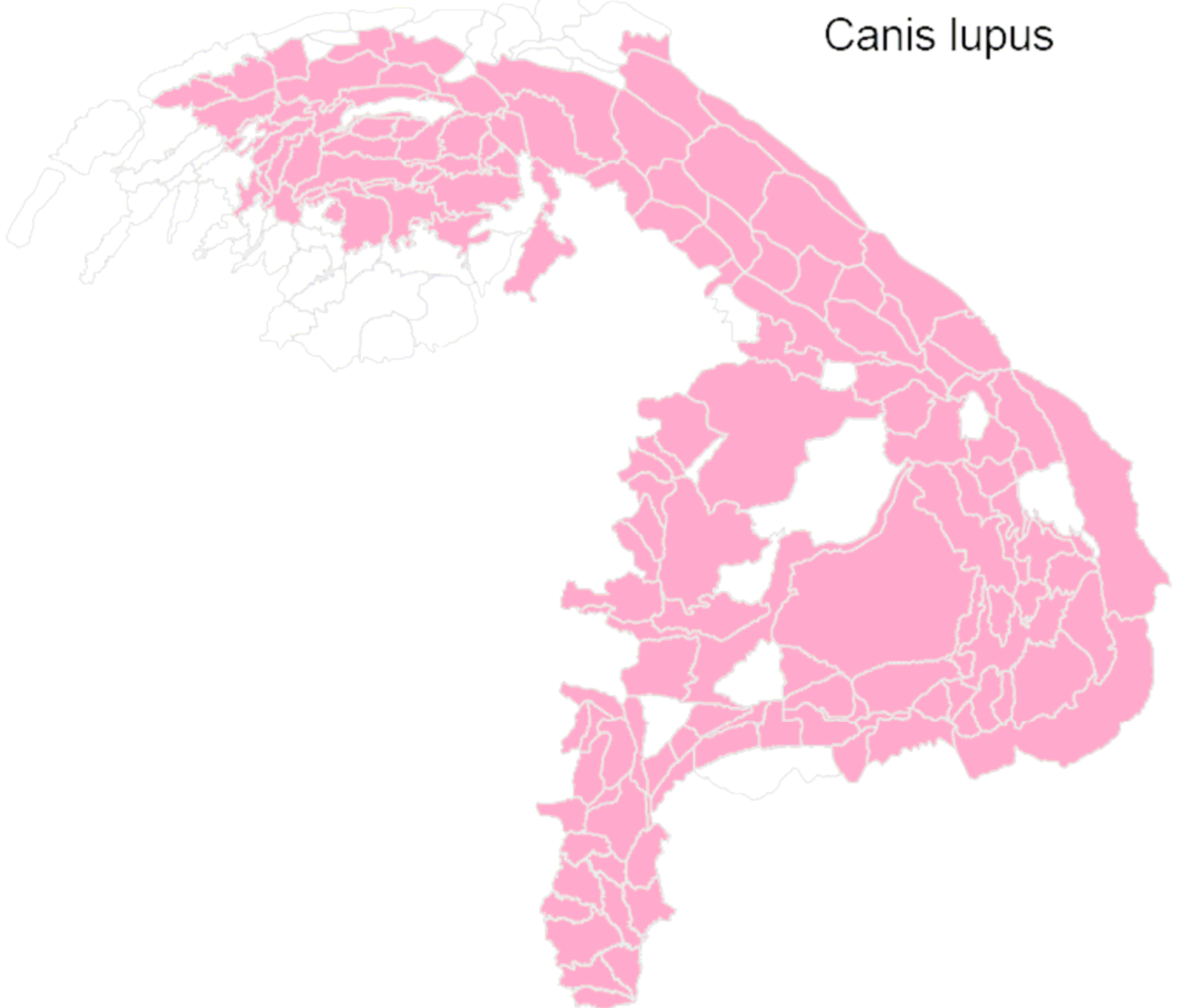
*Aquila pomarina*



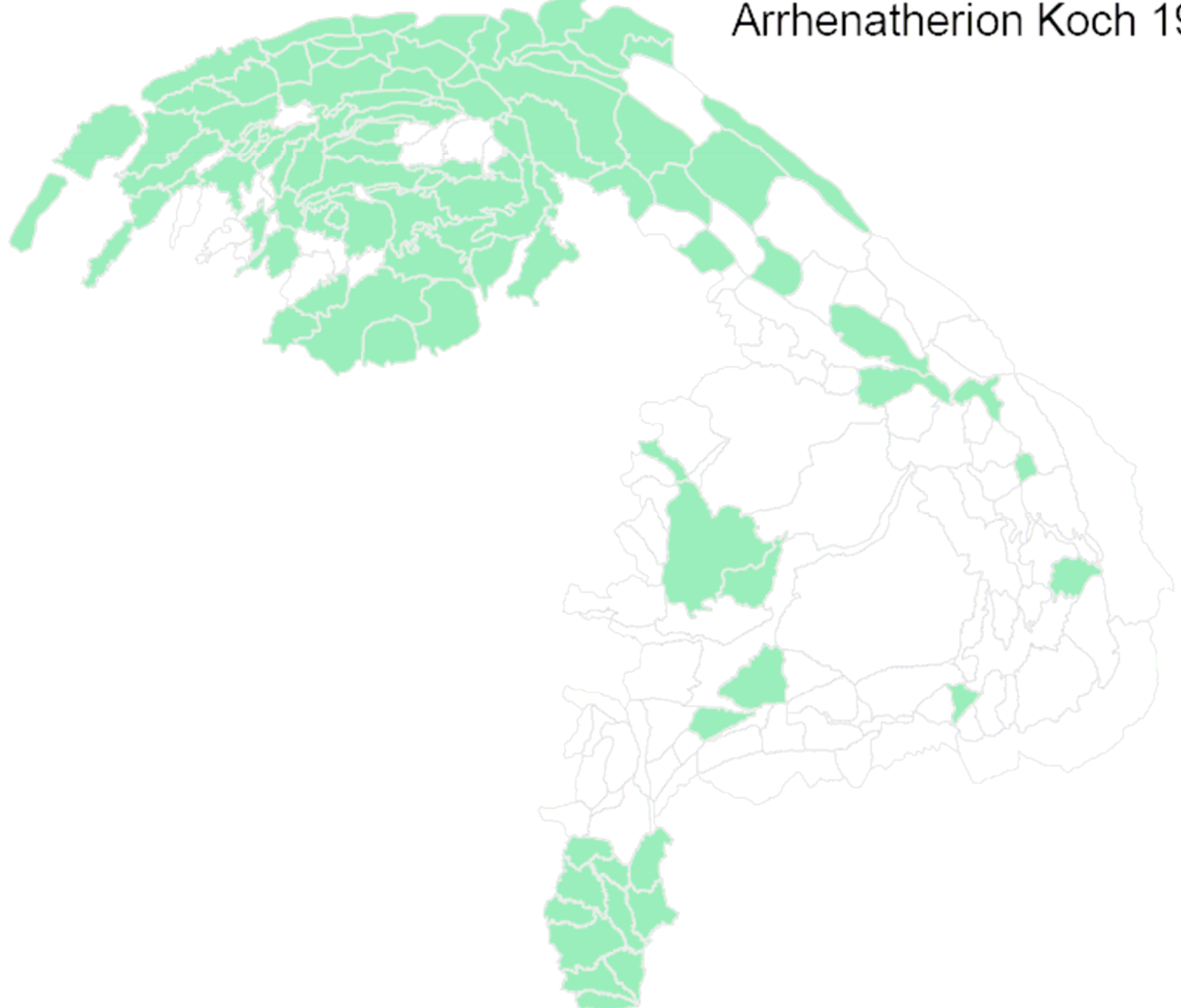
*Elaphe longissima*



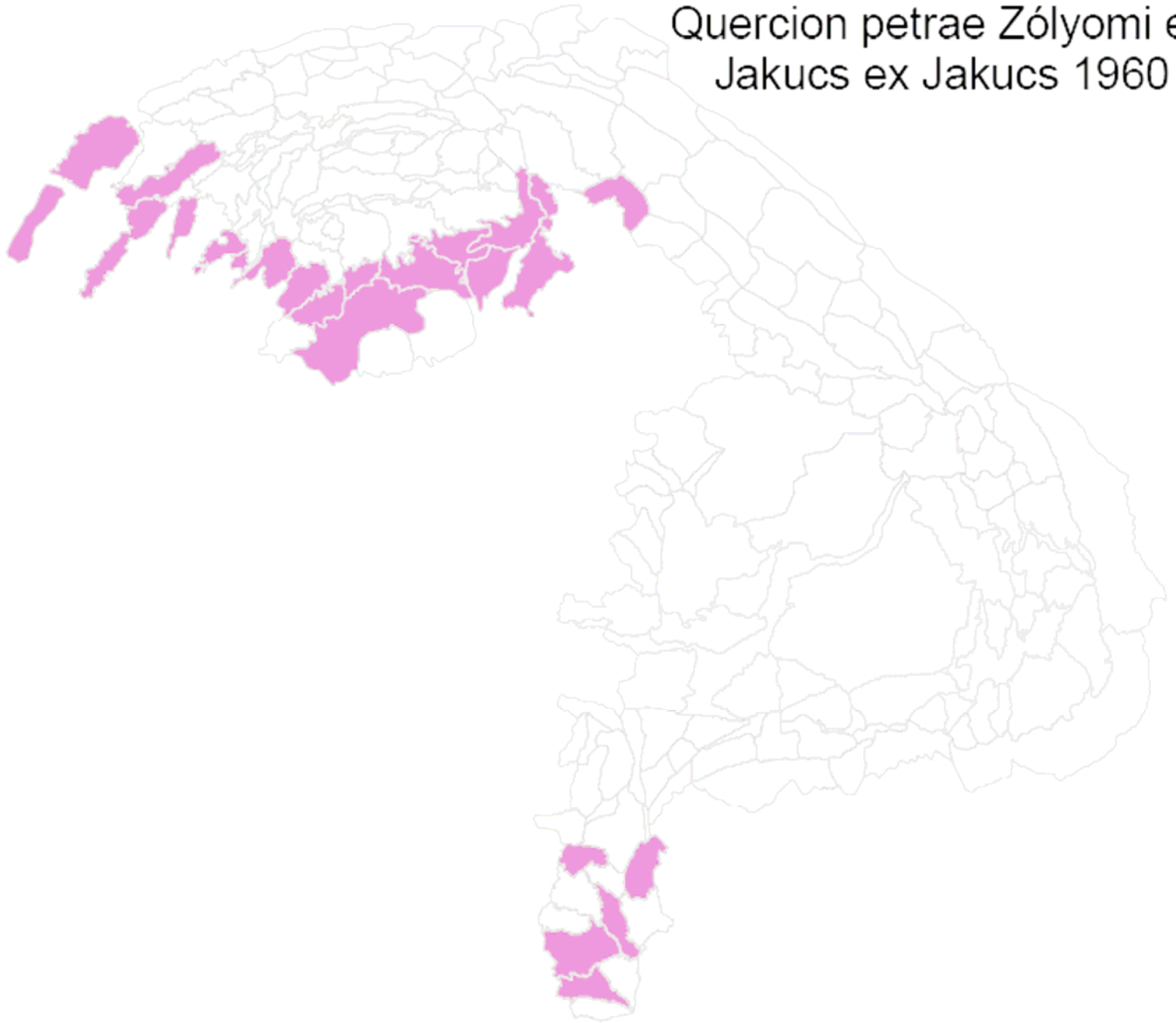
# Canis lupus



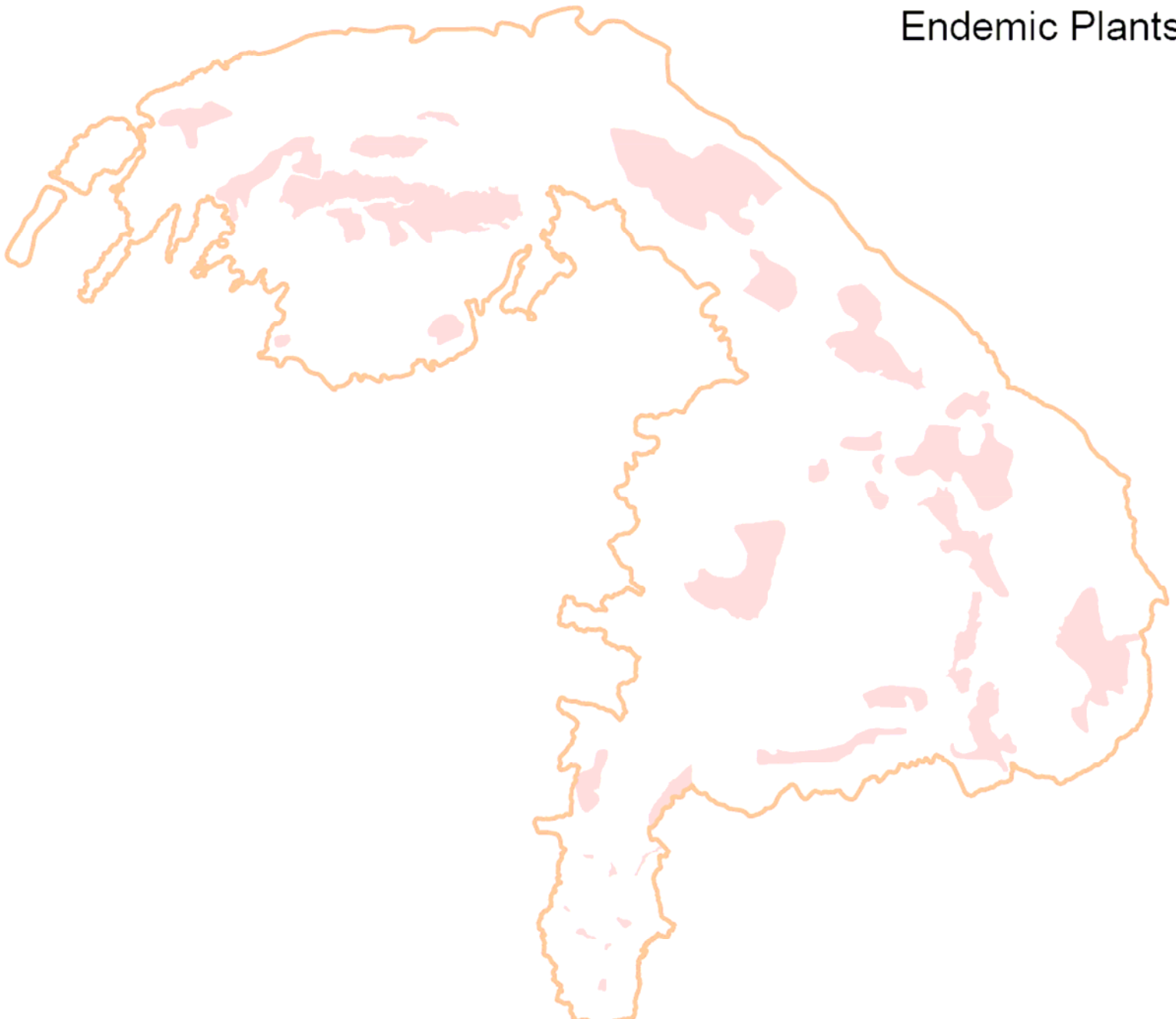
Arrhenatherion Koch 1926



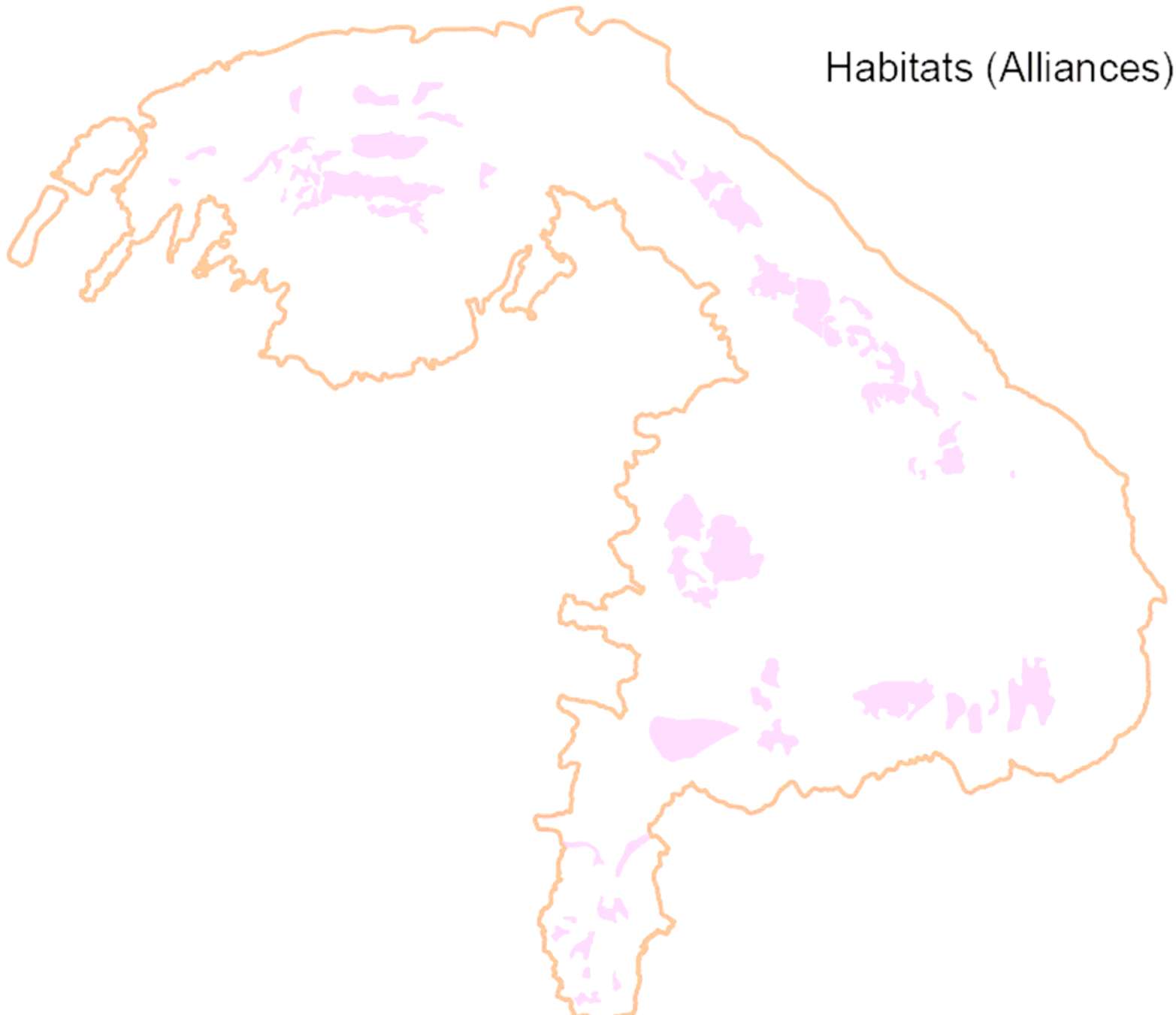
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Jakucs ex Jakucs 1960



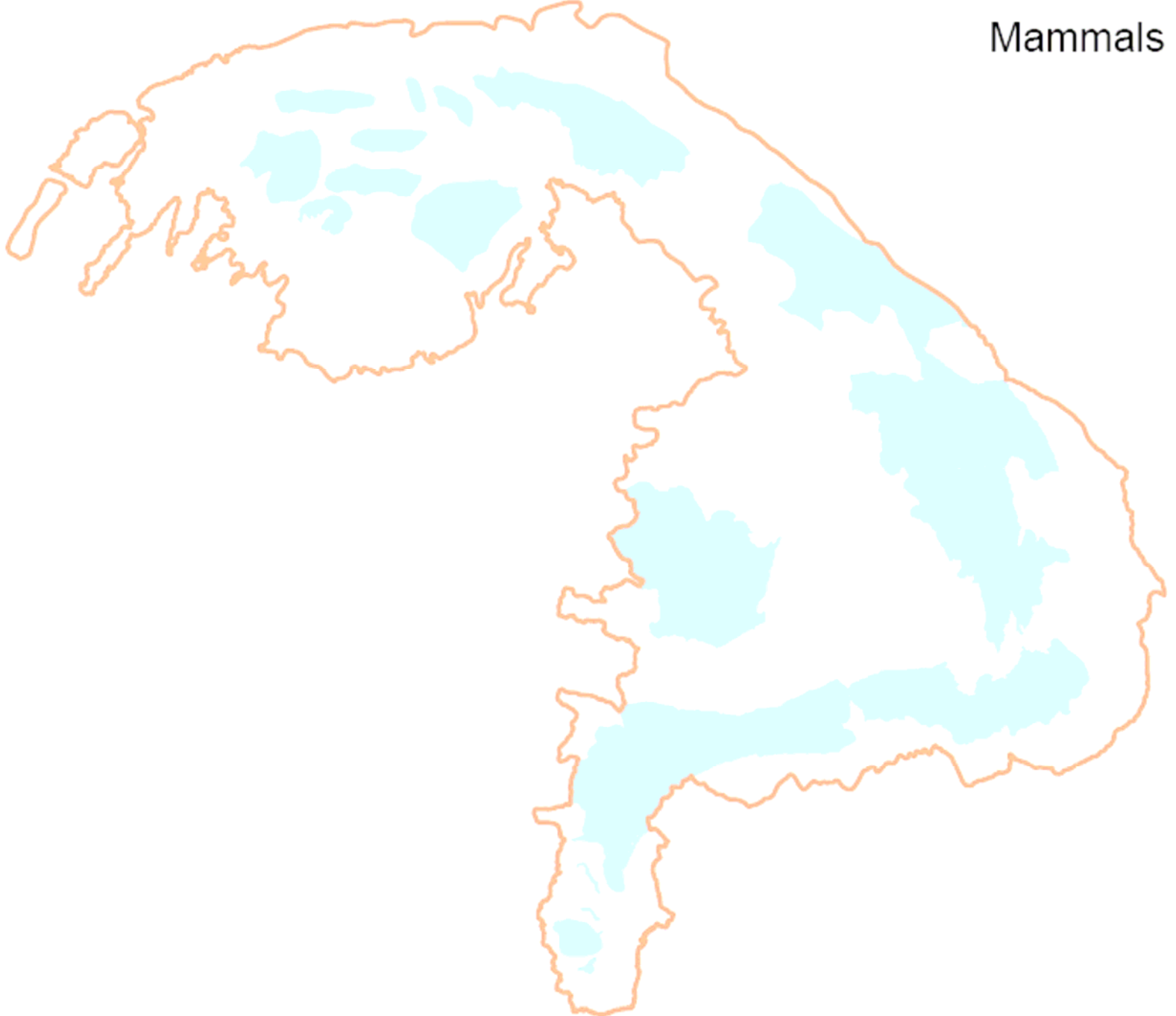
# Endemic Plants



# Habitats (Alliances)



# Mammals



Final results are  
identification 34 Biodiversity  
Important Areas  
and gap analysis for protected  
areas



Continuation:  
Carpathian Ecological Network