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## Outline, aims:

- Some parts of Europe require more conservation attention than others.
- Nature sometimes cannot be restored.
- Some areas of Europe are needed to restore the biodiversity of other parts.
- Case studies demonstrating the need for better understanding and appreciation of transitional regions.

# Some pertinent observations **Europe's biodiversity is unequally distributed.**

#### **GLOBAL BIODIVERSITY HOT SPOTS** Mountains of Caucasus Central Asia Mountains of California Southwest Madrean Mediterranean Floristic China Pine-Oak Basin **Province** Woodlands Irano-Anatolian Himalaya Japan Caribbean Islands Philippines Indo-Burma Afromontano Western Ghats Mesoamerica Polyr and Sri Lanka Tumbes-Guinean Forests Africa Sundaland Chocóof West Africa Cerrado Magdalena Eastern Wallacea Tropical Andes Madagascar and the Forests Indian Ocean of East Islands Australia. Atlantic Forest Succulent, Chilean Coastal Forests of Eastern Africa Winter Karoo Southwest Rainfall-Maputaland-Australia Valdivian Cape Floristic Region Pondoland-Albany **Forests** New Zealand

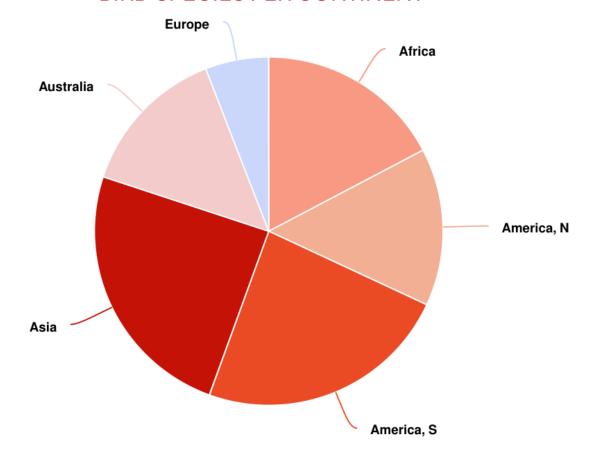
# Some pertinent observations

# Europe has the lowest biodiversity of all ice-free continents.

#### **BIRD SPECIES PER CONTINENT**



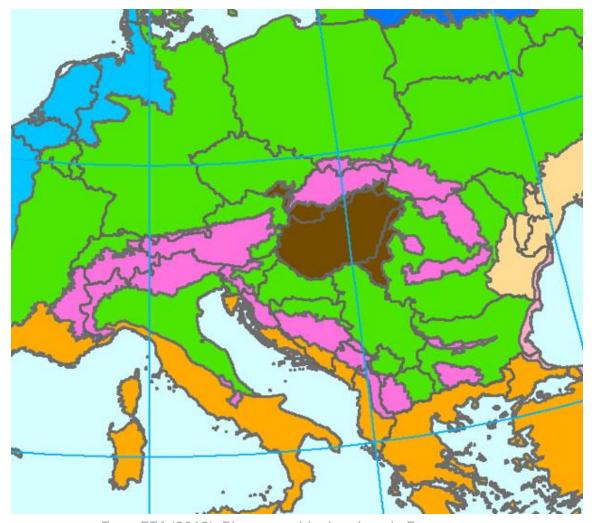
Francis C. Franklin / CC-BY-SA-3.0



Some European regions are more important than others for supporting overall biodiversity and sustaining Europe's nature.

These are Europe's **transitional regions**.

The open question is how to manage them to get the needed reservoir of genes and species for nature restoration.



From EEA (2012): Biogeographical regions in Europe

The disproportionally high biodiversity of transitional regions is a consequence of

- mixing of biogeographical zones;
- historical factors.

This biodiversity is more threatened than elsewhere because of

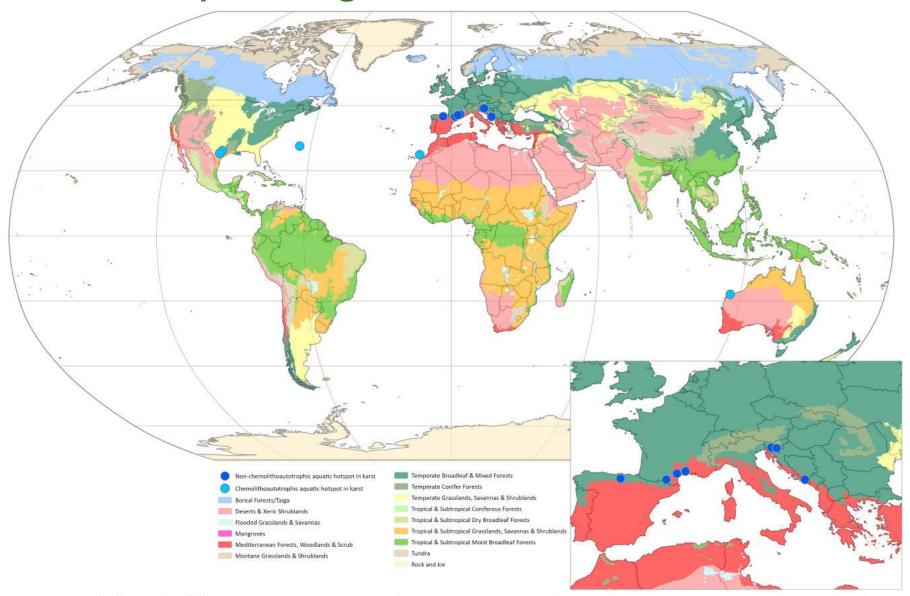
- lower population densities;
- edge effect, disturbance;
- relict and isolated populations;
- less conservation effort because insignificant shares of total population.

The conditions causing the high biodiversity are mostly irreversible and cannot be restored!

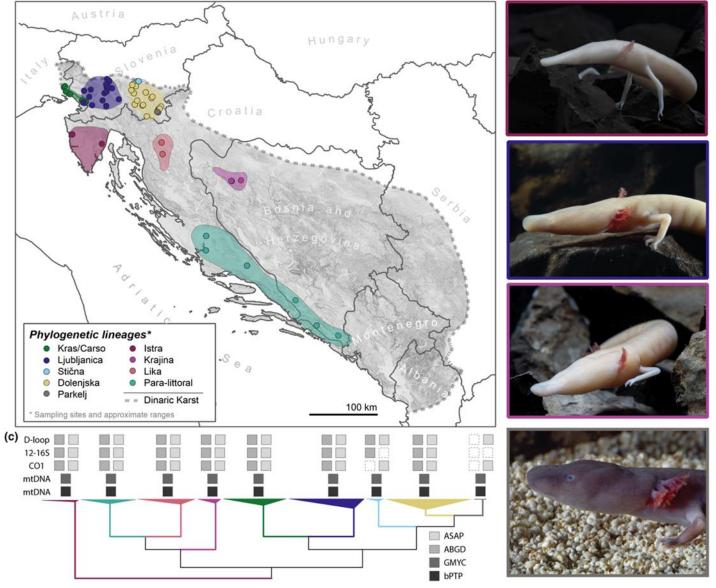


Andreas Trepte, www.avi-fauna.info

# Case No. 1: Europe is the global leader in subterranean biodiversity



# Case No. 1, contd: Nine, not one species of blind European cave salamanders



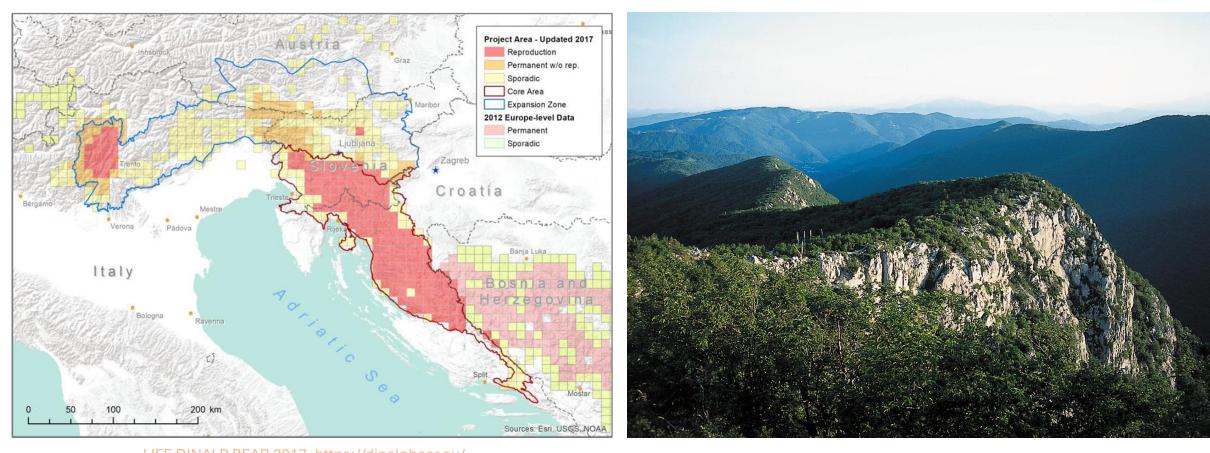
Recknagel, H. et al. (2023): Multiple transitions between realms shape relict lineages of Proteus cave salamanders. Molecular Ecology

# Case No. 2: Transitional corridors restore lost biodiversity



GPS-tracked vultures migrating from Northern Adriatic breeding grounds to the Eastern Alps. Obstacle-free mountain ridges form the essential corridor.

### Case No. 2, contd: Transitional corridors are a service



LIFE DINALP BEAR 2017. https://dinalpbear.eu/

Maintaining a bear population of the current size in an area as small as Slovenia is neither sustainable nor affordable. Without broader conservation goal, it is not beneficial to the species.

# Concluding message:

- Transitional regions contribute a disproportionately large share to regional biodiversity.
- Their ecology and wider significance is not sufficiently understood.
- Transitional regions are insufficiently protected.
- In a European context, shared benefits should also mean shared responsibility.