



Influence of low flows on diversity and recovery of macrozoobenthos communities as one of the components of ecological status assessment according to the Framework Directive.

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- At the Magdeburg Seminar in Teplice we presented the problem of drying of small and medium streams focused on ecological status assessment.
- In years 2014-2017 we met extremely low flow rates even at the large rivers.
- We focused on macrozoobenthos community changes.

Locality, methodology

- Elbe River – Decin
- Elbe River – Valy

- Summer samples, low influence
- Macrozoobentos
- 3 minutes multihabitat sample
- Years 2012, 2014 - 2017



Elbe River - Decin

- Partly natural watercourse
- Stony and gravel shores
- About 100 m width (normal flow rates)
- About 70 m width (low flow rates)
- Right site sample



Elbe River - Valy

- Technically modified watercourse
- Riprap and pavement shores
- About 60 m width (all flow rates)
- Right site sample
- influenced by the drainage of the weir in Prelouc



Physico - chemical factors

- **Temperature increase**
- pH and conductivity changes
- **Oxygen regime changes**
- Increasing nutrient and pollutant concentrations
- Precipitation of metals on the surface of the substrate and organisms
- **The objective reduction of living space and number of microhabitats**
- Reduction of flow velocity
- Siltation

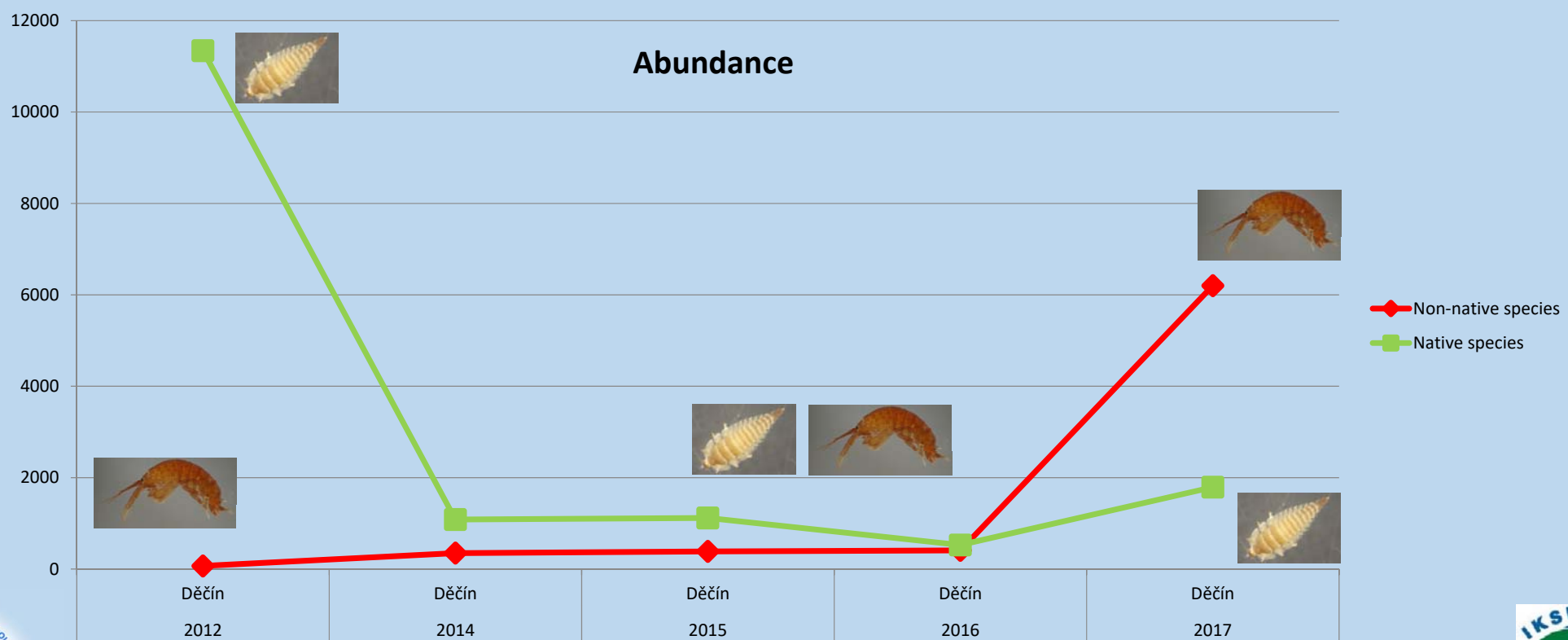
Hydromorphological factors

- **Flow size**
- Geological subsoil
- **Extent, scope and type of anthropic adaptations**
- Landscape type

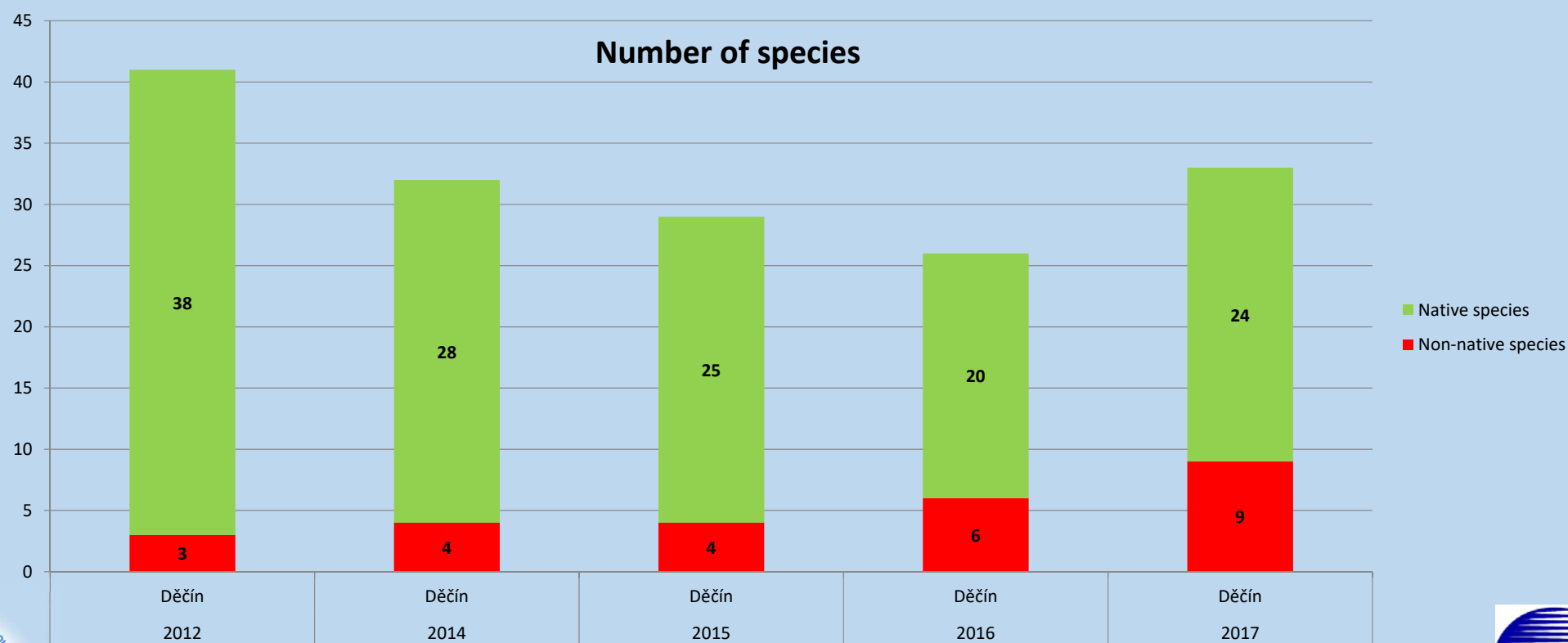
Ecological factors

- **Direct die-off organisms**
- Predation increasing
- Greater parasite development and easier transmission of diseases
- Escape reactions
- **Rising of invasion species populations**

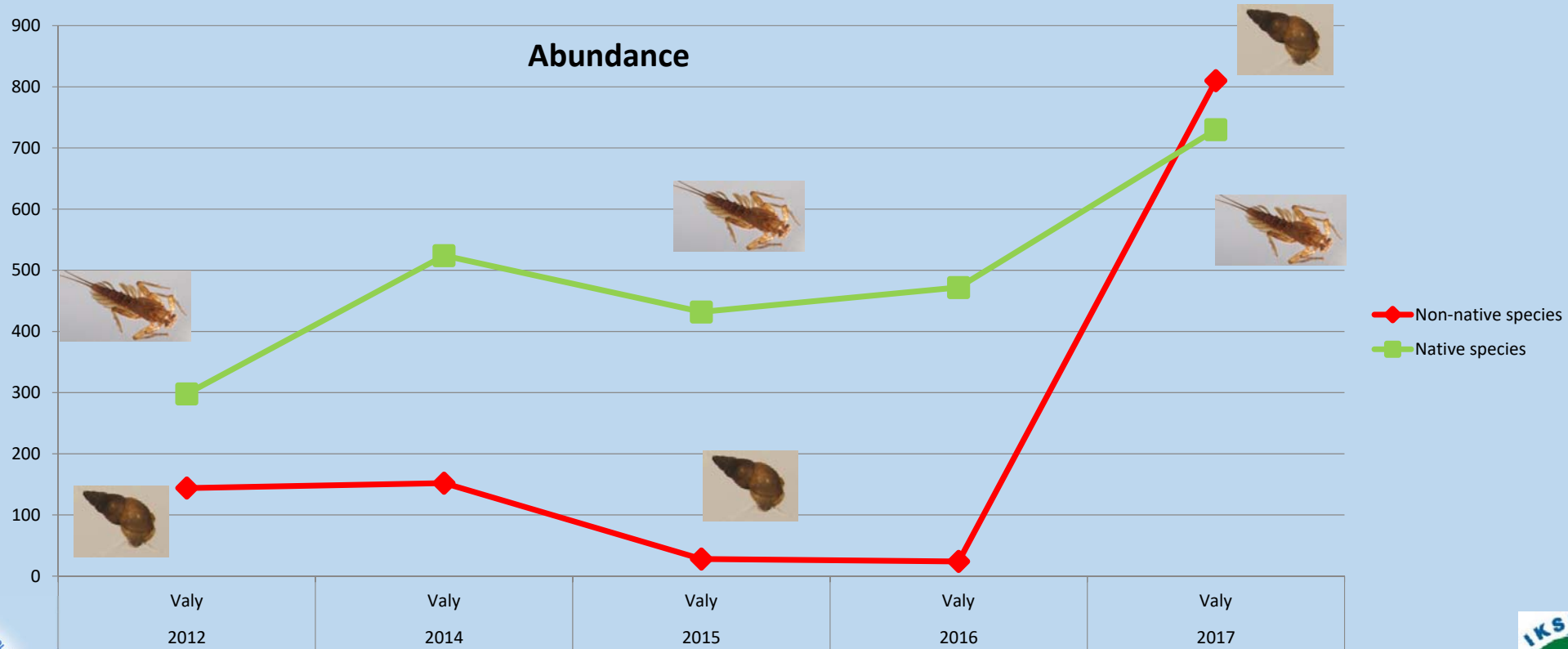
Elbe River - Decin



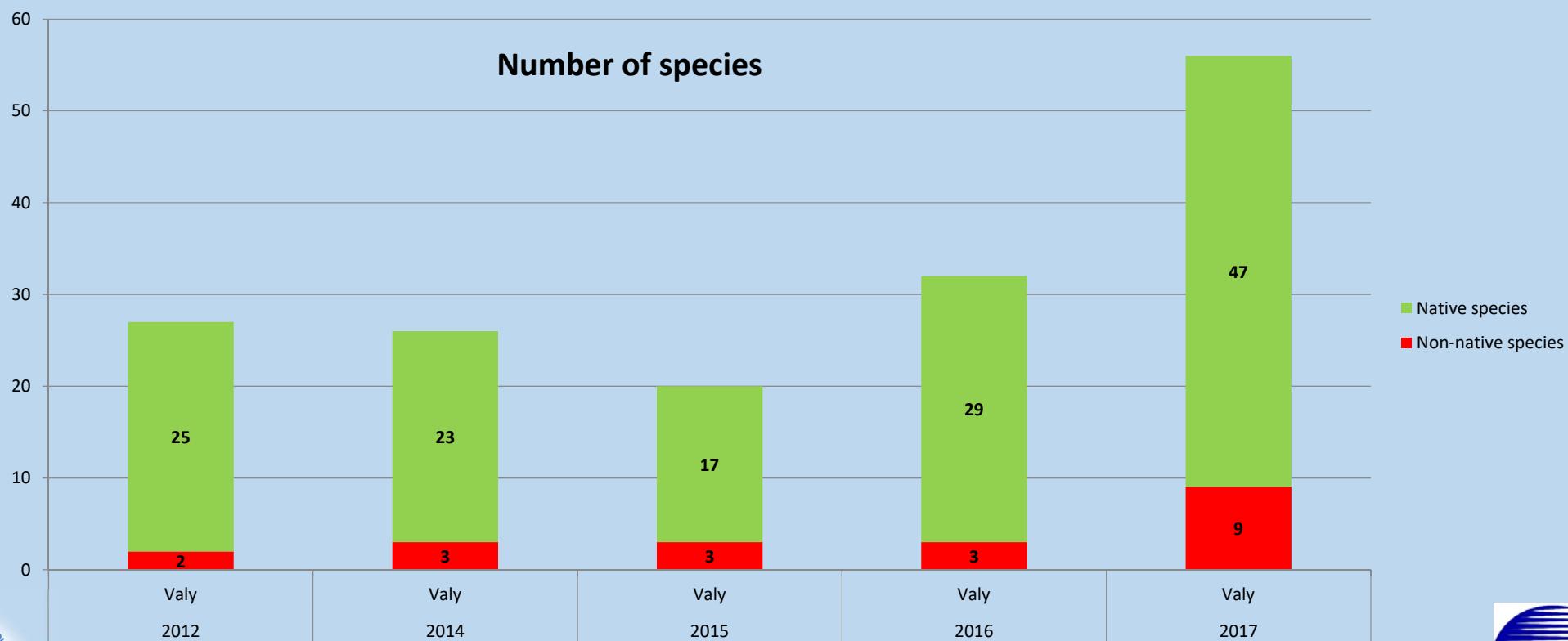
Elbe River - Decin



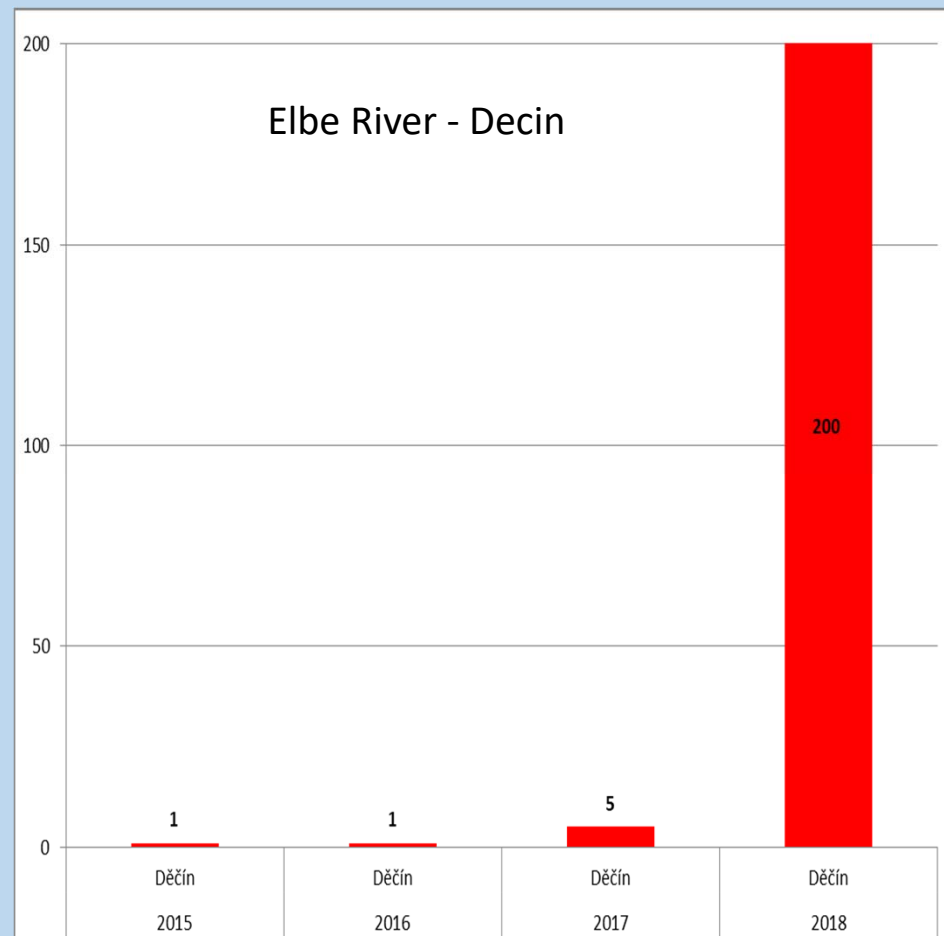
Elbe River - Valy

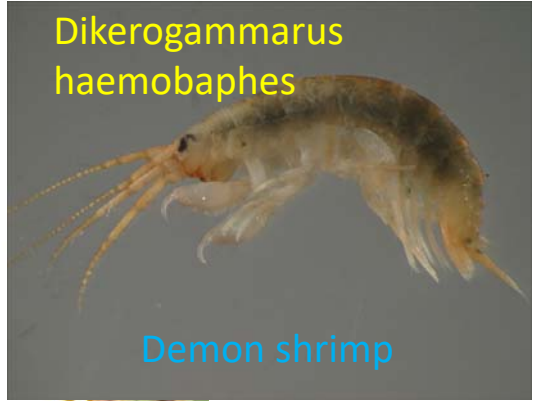
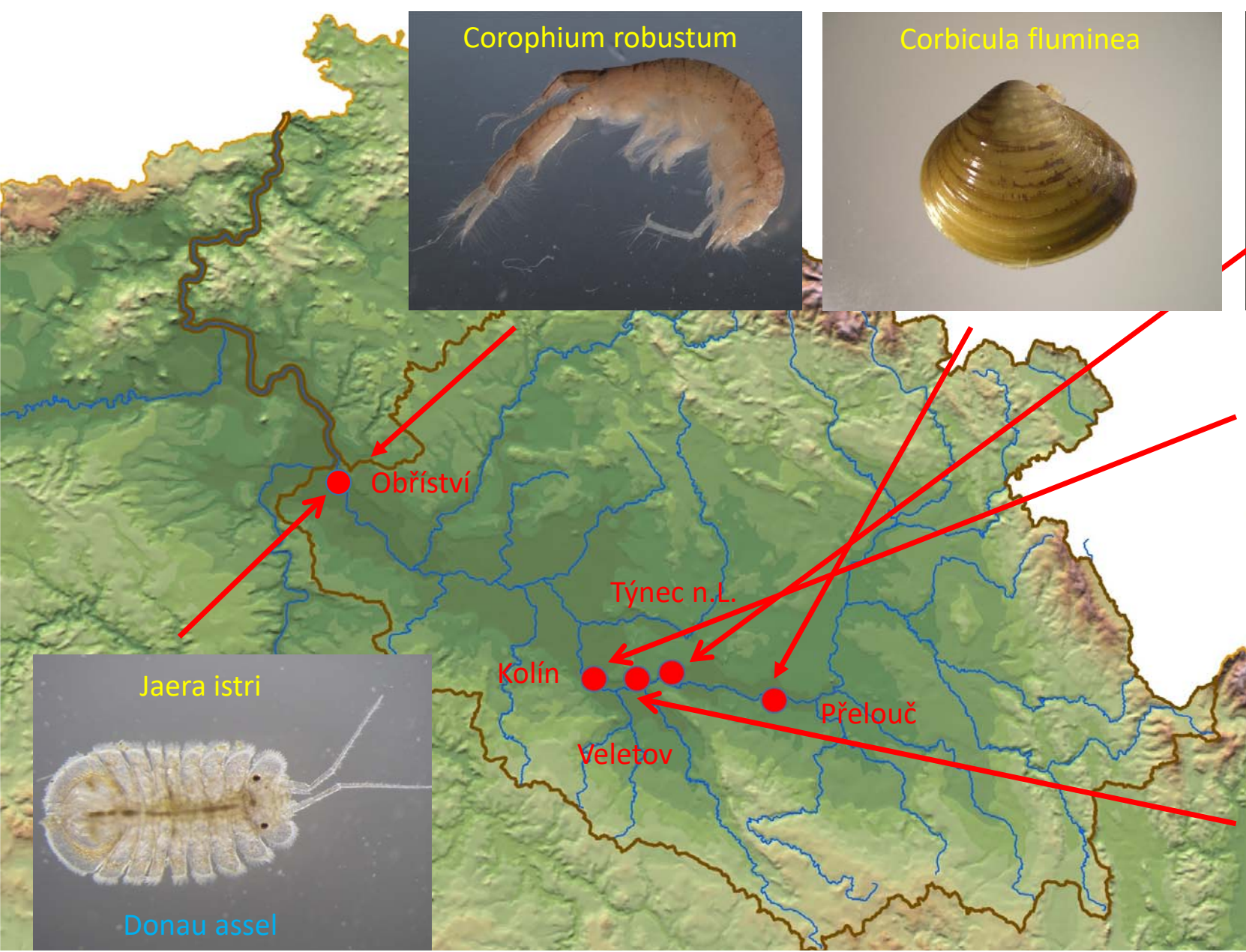


Elbe River - Valy



Neogobius melanostomus – round goby





Thank you for your attention!

