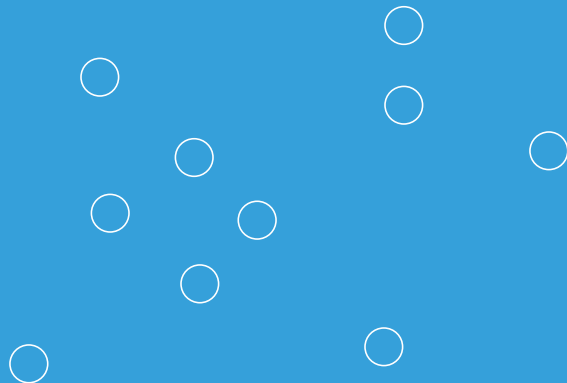
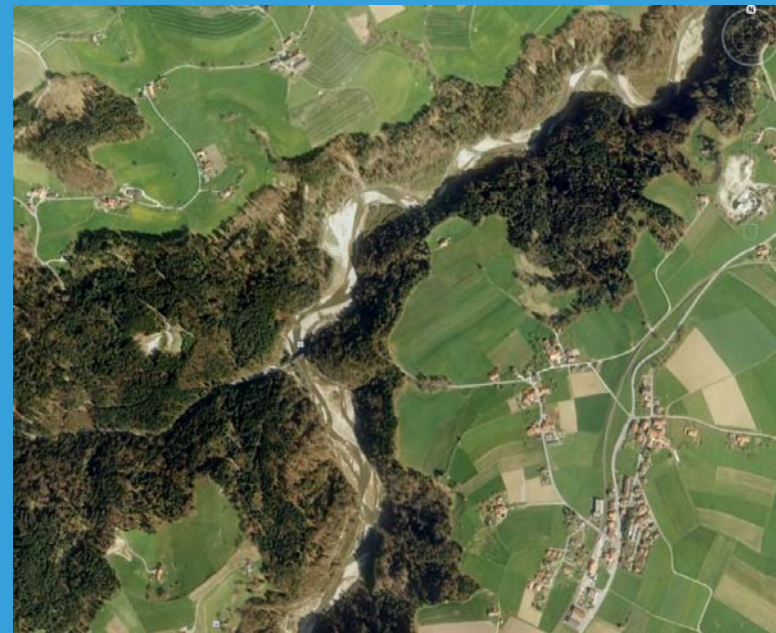


Projekt 2009: Dispersal barriers and gene flow in organisms with different dispersal modes

Maria Alp
Eawag, Aquatic Ecology
Fribourg, 16.03.2009



Overview of Eawag projects on Sense (Department of Aquatic Ecology)

- Molecular study on dispersal in collaboration with WSL
- Continuation of the collaboration with Walter Gostner (EPFL)
– master thesis of Anna Streit
- An additional project on the importance of tributaries –
semester work of Andrea Koopsman

Molecular study – a collaboration of WSL and Eawag

Goal of the project: relate the different modes of dispersal used by the selected organisms with their population genetic structure in relation to coarse scale landscape properties

Scale: Catchment

Method: microsatellite analysis, large scale GIS-analysis of the catchment maps

Involved: Eawag - Irene Keller, Chris Robinson, Armin Peter, Maria Alp

WSL – Christoph Scheidegger, Theresa Karpati, Silke Werth, Kurt Bollmann

Study organisms

Eawag - aquatic organisms

- a mobile aquatic insect with an adult flying phase: *Baetis rhodani*
- a macroinvertebrate dispersing exclusively in the water column: *Gammarus fossarum*
- a fish: *Cottus gobio*

WSL – riparian organisms

- a non flying grasshopper: *Chorthippus pullus*
- a plant: *Myricaria germanica*

Relevance of this project for river restoration

- Large scale landscape analysis will be related with distribution and dispersal of different organisms
- Effective dispersal capacities of different organisms will be estimated and barriers for their dispersal identified
- This knowledge will allow to make more realistic predictions on colonization of restored sites in the future based on the landscape features

The tributary subproject

Andrea Koopsman

A study on the role of tributaries for diversity of aquatic invertebrates in the main stem

Methods:

- GIS analysis
- benthic samples



Thank you for your attention!