

# Optimizing habitats for weasel populations (Common Weasels and Stoats)

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Swimming Stoat (Foto E. Krummenacher)

## Weasels in Swiss Lowlands

Both species (Common Weasel and Stoat) live in Switzerland, and both have probably decreased in number during the last decades, particularly in the Midlands, the vast lowlands between the Jura range and the Alps. The Common Weasel might be very rare, at any rate it is classified as "potentially endangered species" on the Red list of Switzerland (no exact data available). The causes of the decline are not scientifically analyzed but changes in land use and a multitude of wildlife barriers (for example motorways, settlements, canalized running waters) probably are relevant factors.



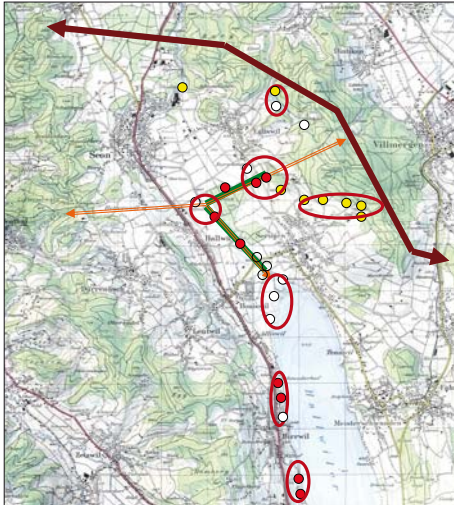
Stoat on hiding site (Foto E. Krummenacher)

## Goals of the project

In 2005, we started a pilot project in the Seetal, a region of the Canton of Aargau, to improve living conditions for weasels. The goal of this project was to support the populations of these two species as a whole, and not just to improve isolated habitats. We consider weasels – especially the Common Weasel, but also the Stoat – to live in metapopulations. Therefore we try to revitalize the natural dynamic in the metapopulation systems by fostering patches as well as interconnections among them.

## Focus on entire population

For the pilot project we chose a partly isolated area where we assumed that the populations of both species were suboptimal. In the living area of these populations we analyzed the size of area, the quantity and location of habitat patches, the general habitat situation (matrix) as well as the network of connections between habitat patches.



- important weaselpatches or „superpatches“
- ● Habitatpatches, realized or optimized in our project. Red: tracking tunnel evaluation, yellow: no tracking tunnel evaluation till now
- new patch realized or optimized by coordinated projects, no tracking tunnel evaluation till now
- connecting structure with cover for weasels
- wildlife corridors and movement axes

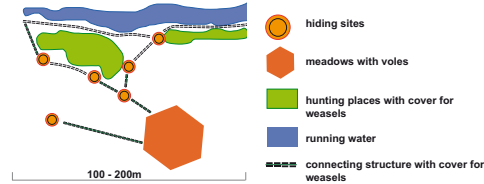
## Fostering habitat patches

The analysis of the population situation showed that improvement of the patches was urgent. We did it by providing essential resources to achieve an optimal mosaic of meadows with voles, hiding and breeding sites (piles of branches or stones) and hunting grounds allowing for full cover for weasels.



Habitat patch

## Structure of a habitat patch



## Better connections between patches

The connections between the patches were often suboptimal. Streets cross and fragment essential paths of the animals. Canalized brooks make it difficult for the animals to cross. Intensive land use without covering vegetation is also considered to be a problem. Therefore, we optimized the most important connections between patches for the weasels.



Connecting brook with piles of branches and passage tree

## Realizing the measures with different partners

The measures we realized were, for example, new hiding sites, hedgerows, ditches with cover, fallow land and passages enabling the animals to cross streets and canalized brooks.

The practical work was done in collaboration with different partners: Nature conservationists, hunters, groups of children and retired persons were realizing hiding sites. Farmers, foresters and other civil servants cooperated to realize different measures.



Local nature conservationists and children building a new hiding site



Ditch with connecting function and tracking tunnel



New hiding sites



New hiding sites

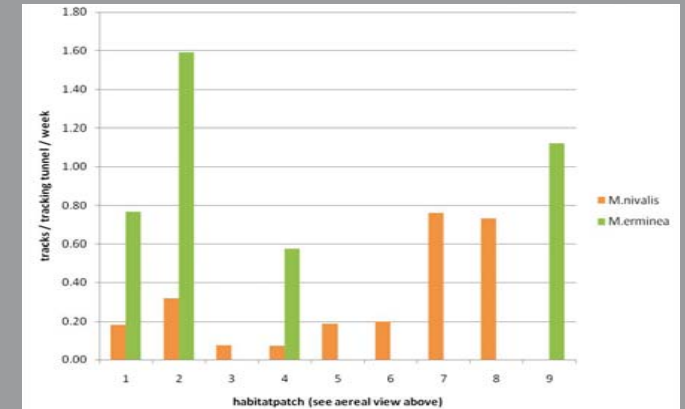
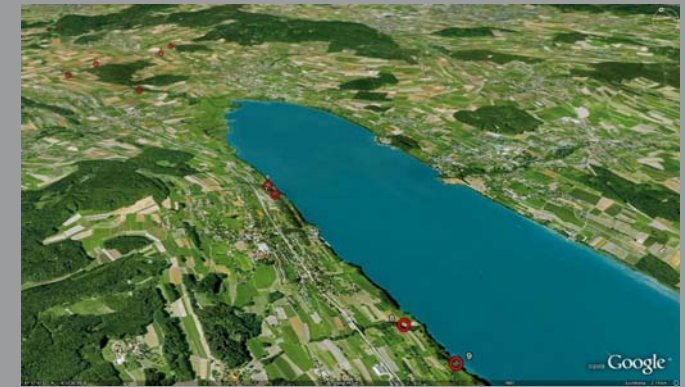
## Effects on the animals – preliminary results

A long-term monitoring of the development of the populations is planned but has not been implemented yet. We are examining, however, whether the optimized patches are accepted by the animals. These investigations are still going on. Methods used are tracking tunnels, snowtracking and analyzing accidental observations. In a preliminary evaluation, tracking tunnels were situated in 18 new hiding sites in 9 optimized patches during 3 to 6 weeks. Since footprints (tracking tunnel method) do not allow 100 percent reliability for Common Weasels, we shall corroborate the presence of this species with live-trapping.

All 9 optimized patches and 78% of the analyzed new hiding sites had already been visited by weasels. The two species were partly separated from each other: In one part of the pilot project, only Common Weasels visited the tunnels, whereas in other parts we only found evidence of Stoats.



Tracking tunnel – hidden in a pile of branches



Preliminary results: average number of weasel tracks in tracking tunnels per week, in some optimized habitat patches (aerial view)

## Further projects

Based upon our experiences in the pilot region, we worked out a general concept of "weasel promotion". Meanwhile similar projects have been started in 4 other regions of Switzerland, on the basis of this concept and coordinated by the program of "Wieselnetz".

- Rhein valley (eastern part of Switzerland)
- a near-prealpine region in the south of Zurich
- a lowland region in the north of central Switzerland
- a region in the Jura Mountains.

Finally, the concept "weasel promotion" might be applied in many other regions. As soon as enough experience of the new regional projects is available we will inform and motivate further interested people to start projects on the basis of our concept. All relevant information and instructions will be published on the website [www.wieselnetz.ch](http://www.wieselnetz.ch) (in german).