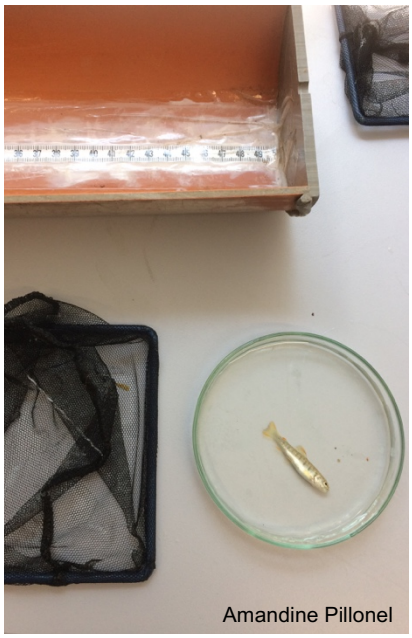
Amandine Pillonel

Trout dispersal and migration study
Case study in an experimental canal

Graduate Pillonel Amandine

Objectives

This master thesis studies trout movements (distance, direction and period of day and year) from the month following the emergence of the fry until adult migration to the lake.

Methods | Experiences | Results

Thanks to electric fishing campaigns, mobile tracking and two fixed antennas, the partially migratory trout population of the Boiron river (Vaud), marked by PIT-tags, has been studied between 2014 and 2017. In parallel, a study was set up in an experimental canal in order to know more about the factors influencing fry dispersal during the months following emergence.
It appears that during their first year of life, juveniles (0+) move little within the river (11.6% of total displacements). It is especially the frailest that leave the environment where the densities are high. Individuals with an above-average Fulton condition factor appropriate the best territories.
Movements occur during the second year (34.2% of total displacements) when trout are immature adult (1+) and mainly during the third year (54.1% of total displacements). A few of these mature adults (>1+) have been spotted up the river by the antennas, probably to breed after living in the lake for a few years.
Most trout movements occur mainly downstream (87%) and at night (73.6%).


Aurélie Rubin

Trout fry a few days after emergence. Their York sac provides them with resources for the first days of life.


Amandine Pillonel

Calcein labeling of fry. This fluorescence is fixed in the calcium of the trout fins and can be detected by a specific lamp.

Master Thesis
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Degree programme
Master in Life Science

Field of application
Natural Resource Management

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