

# Dynamics of downstream and upstream migrating pike (*Esox lucius*) reproducing in a sympatric spawning habitat

Bachelor or Master project in biology, 15-60 hp

This research project aims to explore the dynamics of two alternative spawning migratory strategies of pike that share a sympatric spawning habitat in the lake Långsjön, Nyköping, Sweden. This area was recently restored by the Swedish Anglers association to aid the declining stock of pike in the coastal Baltic Sea

## Background

Removal of migratory barriers and restoration of exploited spawning habitats are key management actions to conserve and aid the recovery of migratory fish species. Such efforts generally aim at favoring the recruitment success by allowing populations to reach historic spawning habitats. In addition, these efforts will also result in regained connectivity among populations that have been physically separated for many generations opening the opportunity for admixture and source-sink dynamics.

Pike is an ecological and socioeconomical key species in the coastal Baltic Sea that have declined substantially during



Petter Tibblin from Linnaeus University (one of the supervisors for this project) releasing a newly tagged pike.

the last decades - likely due to recruitment failure.

To mitigate this wetlands with suitable spawning habitat for pike, which have been inaccessible to pike, are restored.

## Methods

The core of this project relies on field sampling and tagging of adults migrating to, and recruits emigrating from, Långsjön

during the period of late March to early July.

This includes quantifying the number, size distribution and morphology of adults and recruits and their phenology using fyke-nets, traps and insertion of Passive Integrated Transponders (PI-tags). The project can be combined with genetic studies that will be conducted at the SLU, Drottningholm.

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