

Thesis work in Biology or Environmental Science at the Department of aquatic resources, SLU, 15-60 cp

## Round goby – turning risk to resource

The round goby is native in the Black sea and Capian Sea but has probably come by ballast water to the Baltic Sea. It was first reported 1990 in the bay of Gdansk where it is now the most common coastal fish species. In 2008 it was reported in Sweden for the first time, in the archipelago of Karlskrona. It now occurs from Kalmar Sound up to Gävle and also around Gotland and in Gothenburg.



Photo: Isa Wallin and Anna-Li Jonsson, SLU

The round goby is an invasive species with high reproduction speed and highly tolerant for environmental stressors. There is a risk that it will compete with other bottom dwelling species and also consume eggs & fry of native species but it can also be a resource for predatory fish and humans. One concern is that it may invade freshwater systems and knowledge about its migrating capability and potential barriers to stop it from entering rivers is needed. In order to utilize the species and develop efficient fishing gear knowledge is needed about the behavior of the fish around different fishing gears. The suggested projects below are experimental studies contributing with knowledge in both these important areas and they are part of the Research project Round goby – turning risk to resource.

All experiments are conducted in Älvkarleby, by the river Dalälven south of Gävle, either at SLU Fisheries Research Station (FFS) or at the Vattenfalls experimental facility Laxeratorn. Depending on your skills and interest the thesis can either be within biology or environmental science with room for personal research questions. The work is flexible and can be either on candidate or master level.

1. Migration ability (15-60hp), practical work is done during 3-6 weeks between August to September in Vattenfall Laxeratorn with potential complementing studies at FFS in October for the 60hp work. In this experiment the ability to migrate in an artificial fishway at different speed of the water and with different barriers is studied for round goby, trout and bullhead. The study can be done on one or several species depending on the number of credits of the thesis. The work can also be done later in the year on recorded videomaterial from the experiments.
2. Behaviour around fishing gear (15-60hp), practical work is done during 2-3 weeks in September in the Laxeratorn. In this experiment the behaviour of round goby in the vicinity of a fishing gear is studied with the objective to create efficient methods to catch round goby. The work can also be done later in the year on recorded videomaterial from the experiments.

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Link to the research project [Round goby – turning risk into resource | Externwebben \(slu.se\)](#)