

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

Round goby – 3 experimental studies

The round goby is native in the Black sea and Caspian 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, 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 but we do not yet know about its effect in Swedish waters. Basic information about the behaviour in our coastal ecosystems is missing, and the projects below contribute in different ways to our increased understanding of the potential effects of the round goby.

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. Swimming speed (15-60 hp), practical work is done during 2-6 weeks between August to October at SLU vid FFS. In this experiment the maximal swimming speed of round goby and two native species: perch and bullhead is studied by varying the water speed in a small experimental aquaria. The study can be done on one or several species depending on the number of credits of the thesis.
2. Migration ability (30-60hp), practical work is done during 3-6 weeks between August to September in Vattenfall Laxeratorn. In this experiment the ability to migrate in an artificial fisheway at different speed of the water is studied for round goby, perch and bullhead. The study can be done on one or several species depending on the number of credits of the thesis.
3. Interaction with salmon (30-60hp), practical work is done during 4-6 weeks between October to November at SLU vid FFS. In this experiment the effect of round goby on Salmon spawning is studied by observing behaviour of spawning salmon with or without round goby present in a large stream aquaria. Experiments in smaller aquaria is also done to study to what extent Round goby feeds on salmon eggs.

For more information contact Ann-Britt Florin, Fisheries Research Station, Institute of Coastal Research, Swedish University of Agricultural Sciences: ann-britt.florin@slu.se; 010-478 41 22.