

PhD-project: PhD-student Henri Jokinen (MSc); supervisors Alf Norkko (Prof.) and Håkan Wennhage (Assoc. Prof.)

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Title:

Population characteristics and bottlenecks in population maintenance of flounder at the edge of its distribution range

Summary:

The subject of this research-project is the population ecology of European flounder (*Platichthys flesus* (L.)) at the edge of its distribution range, at the Finnish coast of the northern Baltic Sea. Evidence suggests that flounder populations have decreased markedly in the northern Baltic and particularly at the Finnish coast during the last decades. The research aims at addressing the potential reasons for this decline and, more generally, at revealing the mechanisms behind the variability in marginal flatfish populations. We study the recent flounder decline in context of the overall ecosystem change and try to identify factors important for sustaining the flounder population during the course of the ongoing and future environmental change. Specifically we will: explore long-term trends in the flounder population by revisiting long-term data from previously important occurrence localities; identify nursery areas and quantify the relationship between recruitment and habitat quality (and quantity), study patterns in the occurrence of juvenile flounders over temporal (decadal to seasonal) and spatial (geographical to local) scales; use genetics to identify population structure on local and regional scales; and use a life cycle model approach to synthesise the knowledge obtained.

Website: The Benthic Ecology Team at Tvärminne zoological station,
<http://www.helsinki.fi/tvarminne/benthicecology/index.html>