

Master project (examensarbete) in Ecology (30-60 credits)

## Study on the population structure of herring in the central and western Baltic Sea based on the analysis of growth and otolith shape

Stock assessment of herring in the southern Baltic is currently based on a rigid geographical definition of stock boundaries which allocate herring western of Bornholm Island to the so called Western Baltic Spring spawning herring stock and herring on the eastern side of Bornholm to the large central Baltic herring stock. In reality, in this region herring reproduce in coastal habitats along the southern Swedish coasts and along the entire southern Baltic coast from the western to the eastern limits of the basin giving origin to a number of sub-components within these two stocks.

The relationships among the different sub-components within and between the two stocks are poorly understood, as well as the level of mixing and geographical extents of overlap between the different components belonging to the two stocks remain unknown. This lack of knowledge on population structure has profound implications for the management of herring in the Baltic, both in terms of diversity and productivity.

This master project aims to evaluate the relationships between some of the main herring spawning components in the southern Baltic Sea to contribute to the harmonization of stock assessment units definitions and population structure. Moreover, the analyses are expected to identify solid baselines for future discrimination of the main herring components occurring in mixed catches of commercial fisheries and scientific survey across this broad geographical region.

Requirements: good skills in spoken and written English, basic statistical skills (familiarity with multivariate analyses is an advantage)

Work location: Lysekil

Contacts: Valerio Bartolino [valerio.bartolino@slu.se](mailto:valerio.bartolino@slu.se) phone +46761268049  
Carina Jernberg [carina.jernberg@slu.se](mailto:carina.jernberg@slu.se) phone +46761268016

