

Strategic Research Theme : Natural Resources and Sustainability

Research Project undertaken within the **Centre for Marine and Freshwater Research**

Project Title: Advanced Technologies in Commercial Fish Stock Identification

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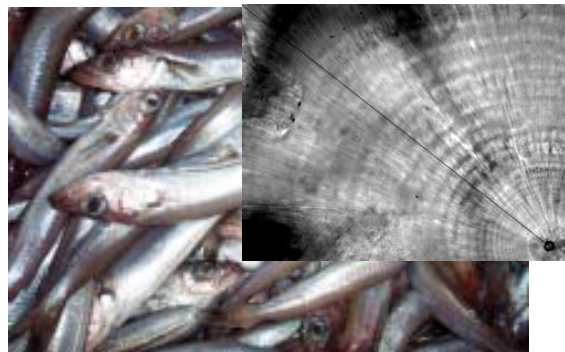
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Project Summary

An Investigation of Stock Structure in Blue Whiting (*Micromesistius poutassou*)

The main spawning aggregations of blue whiting are found to the west of Ireland and Scotland in March-May. Smaller local spawning events are reported at the fringes of the species distribution. The stock structure of blue whiting is uncertain but there is some evidence that the spawning aggregations do not form a homogenous unit.



The elucidation of blue whiting stock structure and migration patterns is central to the provision of a sound scientific basis for management of the fishery. Information is needed on the extent of separation between the suggested components, the migration of sub-populations outside of the spawning season and the overlap in their distribution at juvenile and feeding areas.

Current research at GMIT (Ireland) is addressing these issues in relation to spawning aggregations to the west of Ireland. The Molecular Ecology Research Group (MERG) is completing a genetic study using allozyme and microsatellite markers to detect genetic structuring within the main spawning aggregation. A parallel investigation, being conducted by the Commercial Fisheries Research Group (CFRG), uses otolith microstructure to determine if the suggested stock components are of distinct larval origin. Variation in otolith morphometrics is also being investigated as a means of distinguishing between the two stock components.

Recent results from an analysis of otolith microstructure provide support for the existence of two components and confirm that larval drift patterns together with adult spawning behaviour maintain structure in the adult stock (Brophy and King, ICES CM 2004/EE:26).