

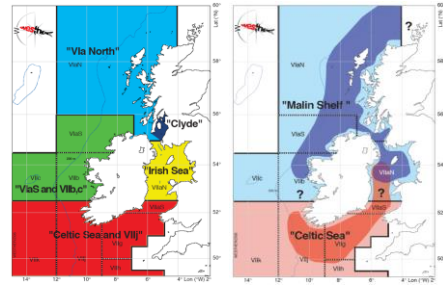
Via Herring stock ID project Update



Pelagic AC, Working Group II,
25th February 2016, Den Haag

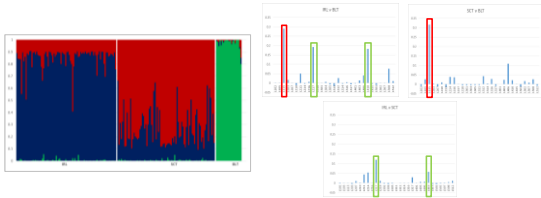
Edward D. Farrell, Jeanette E.L. Carlsson & Jens Carlsson
University College Dublin

Single or multiple herring populations in VIa and VIIb,c?

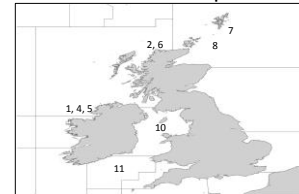


New Approach - 'Next Gen Pop Gen'

- Original WESTHER spawning samples – VIaN, VIaS, Baltic
- WESTHER could not genetically separate the samples
- Re-analysed using new genetic techniques
- Significant differences detected between the samples
- BUT samples were from one year and were over 10 years old



Baseline Samples



#	Baseline samples	Year	n
1	WESTHER 3-S03B (Donegal)	2003	86
2	WESTHER 3-S10B (Cape Wrath)	2003	84
3	WESTHER 4-X01A (western Baltic)	2004	22
4	2014 Irish (VIaS)	2014	240
5	2016 Irish (VIaS)	2016	242
6	2015 Scottish (VIaN)	2015	100
7	2015 North Sea (Shetland 1)	2015	50
8	2015 North Sea (Shetland 2)	2015	100
9	2015 North Sea (location TBC)**	2015	100
10	2015 Irish Sea	2015	100
11	2015 Celtic Sea	2015	250
	Total		1374

2017: Stage 2 – Mixed Stock Analysis of Survey Samples

Duration: 12 months

Deliverables

1. Development and validation of mixed stock analysis model.
2. Screening of SGHERWAY samples from MSHAS and comparison with morphometric analyses for retrospective splitting of survey series.
3. Development of commercial sampling protocols.

2018: Stage 3 – Commercial Sample Screening & Development of High-throughput Protocols

Duration: 24 months

Deliverables

1. Setup of high-throughput laboratory and analysis capacity.
2. Screening of large number of commercial samples.
3. Continued screening of MSHAS survey samples.
4. Investigation into novel eDNA based sampling methods to reduce cost and improve efficiency.

Stage 1 - Development of New Baseline

Duration: 12 months

Funding: Marine Institute, Marine Scotland, Irish, Scottish and Dutch industries through EAPO

Status

1. Contracts finalised
2. Starting immediately (Feb 2016)

Deliverables

1. Screening of baseline samples and confirmation of temporal stability of genetic structure.
2. A panel of high-graded temporally stable informative genetic markers.
3. A baseline with which to compare mixed survey and fishery samples.
4. Development of automated genotyping application for data analyses

Funding for future stages?

1. Irish Department of Agriculture, Food and the Marine 2015 Competitive Call for Research Proposals
 - Joint UCD-MI application submitted Dec 2015
 - Results of review expected by mid 2016
2. EU Commission 2017-2018 Work Programme
 - Planned to incorporate into the draft WP in April 2016
3. H2020?
 - SFS 21 - 'Advancing basic biological knowledge and improving management tools for commercially important fish and other seafood species'