### Theme Session N

**The pelagic fish complexes in the North Atlantic Ocean: Distribution, productivity, and inter-specific competition during changing climate**

Conveners: Asta Gudmundsdottir, Iceland, David Miller, the Netherlands, and Geir Huse, Norway

<table>
<thead>
<tr>
<th>CM Code</th>
<th>Title</th>
<th>Authors</th>
<th>Keywords</th>
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<tbody>
<tr>
<td>N:01</td>
<td><strong>Title:</strong> Journey of the Atlantic Mackerel into Icelandic waters: Can genetics tell us about its origin?</td>
<td><strong>Authors:</strong> Christophe Pampoulie <em>et al.</em></td>
<td><strong>Keywords:</strong> Genetic, Atlantic Mackerel, microsatellite loci, Icelandic waters, migration, invasion, climate change</td>
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<td>N:02</td>
<td><strong>Title:</strong> The spawning migration of capelin (<em>Mallotus villosus</em>) in Icelandic waters.</td>
<td><strong>Authors:</strong> Anna H. Olafsdottir and George A. Rose</td>
<td><strong>Keywords:</strong> capelin, <em>Mallotus villosus</em>, spawning migration, staging, cue mechanism, temperature, predation, gonad maturity</td>
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<td>N:03</td>
<td><strong>Title:</strong> Stock identification of herring in the North Atlantic based on otolith shape</td>
<td><strong>Authors:</strong> Lísa Anne Libungan, Guðmundur Jóhann Óskarsson, and Snæbjörn Pálsson</td>
<td><strong>Keywords:</strong> stock identification, otolith shape, mixed fisheries, herring, stock identification, otolith shape, mixed fisheries, herring</td>
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<td>N:04</td>
<td><strong>Title:</strong> Diet and trophic relations of blue whiting in the North-eastern Atlantic</td>
<td><strong>Authors:</strong> Andrey V. Dolgov and Irina P.Prokopchuk</td>
<td><strong>Keywords:</strong> blue whiting, diet, feeding, Barents Sea, Norwegian Sea, British Isles, trophic relations</td>
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<td>N:05</td>
<td><strong>Title:</strong> Schooling dynamics of Northeast Atlantic mackerel (<em>Scomber scombrus</em>) during summer in the Norwegian Sea using multibeam sonar</td>
<td><strong>Authors:</strong> Justine Diaz, Hector Pena, Leif Nøttestad, Geir Huse, and Anders Fernö</td>
<td><strong>Keywords:</strong> schooling, NEA mackerel, Norwegian Sea, behaviour, multibeam sonar</td>
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<td>N:06</td>
<td>Tracking effects of climatic variation on interspecific competition and top-down control using multidisciplinary datasets: Baltic Sea herring (<em>Clupea harengus</em>) and sprat (<em>Sprattus sprattus</em>) in the southern Baltic Sea</td>
<td>M. Bernreuther <em>et al.</em></td>
<td>herring, sprat, competition, top-down control, climatic variation, Baltic Sea</td>
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<td>N:07</td>
<td>A detailed characterisation the spawning distribution of Blue Whiting</td>
<td>Fabien Pointin and Mark R. Payne</td>
<td>Blue Whiting; Continuous Plankton Recorder (CPR); larvae; spawning; sub-polar gyre</td>
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<td>N:08</td>
<td>Recent changes in migration and distribution of capelin in the Iceland-East Greenland-Jan Mayen area and their effect on managing fisheries from the stock in a changing environment.</td>
<td>A. Gudmundsdottir, Th. Sigurdsson, S. Sveinbjörnsson, and S.P. Jónsson</td>
<td>capelin, Iceland, distribution, migrations, management, surveys, environment</td>
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<td>N:09</td>
<td>Productivity of the Norwegian Spring Spawning herring stock: disentangling stock and environmentally related variations as a means to understanding climate change effects.</td>
<td>Richard D.M. Nash, Erling Kåre Stenevik, Geir Huse, and Aril Slotte</td>
<td>Norwegian Spring spawning, herring, surplus production, productivity, Norwegian Sea, migration, spawning location</td>
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<td>N:10</td>
<td>Ecosystem considerations in the assessment of northwest Atlantic herring; predatory consumption, time-varying natural mortality, and effects on management quantities</td>
<td>Jonathan J. Deroba</td>
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<td>N:11</td>
<td>Withdrawn</td>
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<td>N:12</td>
<td>A behavioural fish movement approach within an anchovy IBM model to study fish migration patterns in the Bay of Biscay</td>
<td>Dimitrios Politikos, Martin Huret, and Pierre Petitgas</td>
<td>anchovy, movement, individual-based model, dynamic environment</td>
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<tr>
<td>N:13</td>
<td>Changes in abundance, distribution and migration patterns of Northeast Atlantic mackerel during summers 2007–2013</td>
<td>Leif Nøttestad <em>et al.</em></td>
<td>NEA mackerel, Nordic Seas, feeding, geographical expansion,</td>
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length-dependent migration, new distribution pattern, temperature effect

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<th>N:14</th>
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<tr>
<td>Title: Genetic structure of Atlantic herring (<em>Clupea harengus</em> L.) in the Norwegian Sea and adjacent waters</td>
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<tr>
<td>Authors: Sarah J. Helyar et al.</td>
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<tr>
<td>Keywords: Herring, <em>Clupea harengus</em>, fisheries management, microsatellites, population structure.</td>
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<tr>
<td>Title: The ENAC model - A multispecies model incorporating interaction for pelagic fish species</td>
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<tr>
<td>Authors: Kjell Rong Utne, Dankert Skagen, Jens Christian Holst, Sondre Aanes, and Geir Huse</td>
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<tr>
<td>Keywords: Norwegian spring spawning herring, blue whiting, mackerel, species interactions, ecosystem based fisheries management, multispecies model, harvest control rules.</td>
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<th>N:16</th>
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<tr>
<td>Title: Recent occurrence of juvenile Atlantic mackerel (<em>Scomber scombrus</em>) in Icelandic waters</td>
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<tr>
<td>Authors: Björn Gunnarsson, Jónas P. Jónasson, Kai Logeman, and Guðmundur J. Óskarsson</td>
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<tr>
<td>Keywords: Iceland, <em>Scomber scombrus</em>, juvenile otolith, distribution, hatching day, nursery area</td>
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<td>Title: Rise of the boarfish: recent boom, range expansion or influx from the deep?</td>
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<tr>
<td>Authors: Edward D. Farrell et al.</td>
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<tr>
<td>Keywords: boarfish, distribution, northeast Atlantic, recruitment</td>
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<tr>
<td>Title: Variability in summer distribution of juvenile albacore in the Northeast Atlantic: implications in terms of feeding success and top-down trophic impacts.</td>
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<tr>
<td>Authors: Nicolas Goñi, Haritz Arrizabalaga, Igor Arregui, Igaratza Fraile, and Josu Santiago</td>
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<tr>
<td>Keywords: North Atlantic, albacore, migration, distribution, feeding success, trophic impacts</td>
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<th>N:19</th>
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<tr>
<td>Title: The distribution of blue whiting West of the British Isles and Ireland</td>
<td></td>
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<tr>
<td>Authors: Sven Gastauer et al.</td>
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<tr>
<td>Keywords: blue whiting, climate, pelagic fisheries, recruitment, sub-polar gyre</td>
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<td>Title: The distribution and behaviour of mesopelagic fish West of the British Isles</td>
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<tr>
<td>Keywords: mesopelagics, ecosystem, behaviour, distribution, vertical migration</td>
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</table>
Title: Ecological impact of NE-Atlantic mackerel (*Scomber scombrus*) in Icelandic waters; a multidisciplinary diet analysis.

Authors: Cecilia E. K. Kvaavik, Guðmundur J. Óskarsson, Sarah Helyar, Jonathan Grabowski, and Guðrún Marteinsdóttir

Keywords: Gut content, consumption, stable isotopes, RT PCR, DNA barcoding, ecological impacts, mackerel *Scomber scombrus*

Title: Experimental jigging with light attraction on European flying squid (*Todarodes sagittatus*) in Icelandic waters and some notes on earlier trawl-fishing trials on the species

Authors: Einar Jónsson and Ólafur Arnar Ingólfsson

Keywords: *Todarodes sagittatus*, squid

Title: Changes in pre-spawning herring (*Clupea harengus*) distribution in the Irish Celtic Sea from 2005-2012

Authors: Mareike Volkenandt, Ian O’Connor, Simon Berrow, and Ciaran O’Donnell

Keywords: Celtic Sea, Herring, distribution, spawning grounds

Title: Comparative impacts of temperature on egg ecology of pelagic fish species in the north Atlantic

Authors: Stavroula Tsoukali, André W. Visser, and Brian R. Mackenzie

Keywords: small pelagic fish, eggs, life history traits, temperature effects, north Atlantic

Title: Evaluation migrations of Baltic herring on the basis of parasitic infection and morphometric characteristics - implications for assessment and management of western and central stocks

Authors: M. Podolska, J. Horbowy, and K. Nadolna

Keywords: herring, migration, stock assessment, Baltic

Title: Inter-annual Variation in Fat Content of the Icelandic Capelin (*Mallotus villosus*)

Authors: Viðar Engilbertsson, Guðmundur J. Óskarsson, and Guðrún Marteinsdóttir

Keywords: Capelin, *Mallotus villosus*, fat content, energetic condition, feeding migration, soxhlet, environmental variables.

Title: Spawning migration change in the southern component of the Northeast Atlantic Mackerel (*Scomber scombrus*)

Authors: A. Punzón, B. Villamor, P. Carrera, and R. Gonzalez-Quirós

Keywords: Mackerel, migration, southern component
| Poster | Title: Uncovering the biophysical forces shaping marine fish distributions  
Authors: Jed Macdonald, Þorsteinn Sigurðursson, Kai Logemann, and Guðrún Marteinsdottir  
Keywords: Atlantic herring; correlative models; fish behaviour; ocean physics; distribution forecasts |
| --- | --- |
| Poster | Title: Genetic origin and age determination of marine caught salmon (*Salmo salar*)  
Authors: Kristinn Olafsson *et al.*  
Keywords: Atlantic salmon, pelagic complex, individual assignment, GRASSP, age determination |