

**Theme Session on Connecting Physical-Biological Interactions to Recruitment Variability,  
Ecosystem Dynamics, and the Management of Exploited Stocks (O)**

Conveners: Elizabeth North, USA, Mike St. John, Germany, and Alejandro Gallego, UK

Agenda and Order of the Day

Wednesday 21 September 13.30–18.00 (Boyd Hall)

		<b>Time</b>
<b>1.</b>	<b>Opening</b>	13.30
<b>2.</b>	<b>Introduction</b>	
<b>3.</b>	<b>Presentation of Papers</b>	
<i>Code</i>	<i>Author(s) and title</i>	
O:15	<i>Yoshiki Kato and Shingo Kimura: Effects of turbulence on the ingestion rate and survival rate of bluefin tuna, <i>Thunnus thynnus</i>, larvae</i>	13.45
O:26	<i>J. E. Stiansen, S. Sundby, A. Jenkins, and J. E. O. Nilsen: Swells as a turbulence source in shallow water</i>	14.00
O:30	<i>Peter Munk, S. Jonasdottir, and H.A. Thomsen: The linkage between frontal hydrography and distributional patterns of meso-zooplankton and fish larvae</i>	14.15
O:17	<i>Benjamin Planque, Pascal Lazure, Marc Segond, Cyril Fonlupt, and Denis Robillard: Detection and historical reconstruction of mesoscale hydrographic features: an application to the Bay of Biscay continental shelf</i>	14.30
O:09	<i>Enrique Portilla, Doug Beare, Eddie McKenzie, I. Gibbs, F. Burns, and Dave Reid: Small-scale variation on mackerel egg mortality over a high density patch</i>	14.45
O:29	<i>Andrei Makarchouk: Interannual and seasonal changes of the mortality rates of sprat eggs in the Gotland Basin (Eastern Baltic Sea)</i>	15.00
O:22	<i>E.M Karasiova and A.S. Zezera: Interannual variability of sprat abundance at early ontogenetic stages in the Gdansk Deep of the Baltic Sea: retention contribution into high density aggregation formation</i>	15.15
	<b>Coffee break</b>	15.30
O:18	<i>U. Hochbaum, M.A. Peck, W. Kühn, M.A. St. John, and C. Schrum: Simulating the influence of climate variability on larval fish survival: An example using sprat (<i>Sprattus sprattus</i>) in the southern North Sea</i>	16.00
O:14	<i>Akihide Kasai and Kousei Komatsu: Transport and survival processes of eggs and larvae of jack mackerel in the East China Sea</i>	16.15
O:19	<i>T. Kristiansen, R.G. Lough, F.E. Werner, Ø. Fiksen, and L.J. Buckley: A comparison of larval cod (<i>Gadus morhua</i>) growth models applied to the Georges Bank and Norwegian Sea regions</i>	16.30
O:27	<i>Øyvind Fiksen, F. Vikebø, T. Kristiansen, and S. Sundby: Drift and growth of larval Northeast Arctic cod emerging from behavioural rules</i>	16.45

O:34	<i>Pierre Petitgas, Pascal Lazure, and Patrick Grellier: Validation of a biophysical larvae drift, growth and survival model on anchovy in Biscay with a framework for its operational use</i>	17.00
O:28	<i>Corinna Schrum, Irina Alekseeva, and Michael St. John: Modelling zooplankton and characteristic larval feeding environments in the North Sea with an NPZD model</i>	17.15
O:10	<i>Thomas Neumann and Wolfgang Fennel: A method to represent vertical migration of zooplankton in 3D-Eulerian models</i>	17.30

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Thursday 22 September 11.00–18.00 (Boyd Hall)

O:21	<i>Laure Pecquerie, Pierre Petitgas, Martin Huret, and Alain Ménesguen:</i> Which time and spatial scales should be used to model anchovy seasonal distribution in the Bay of Biscay according to physical and biological conditions?	11.00
O:08	<i>Åse Husebø, Erling Kåre Stenevik, Aril Slotte, Frode Vikebø, Arild Folkvord, and Petter Fossum:</i> Size-selective mortality in Norwegian spring-spawning herring juveniles?	11.15
O:04	<i>K. Świtek, A. Gallego, and M. Heath:</i> Modeling the growth of sandeel larvae as a function of temperature and zooplankton concentration: “Do larvae eat temperature?”	11.30
O:05	<i>H.-H. Hinrichsen and H. Baumann:</i> Combining otolith microstructure analysis and hydrodynamic modeling: an approach to link Baltic sprat larval and juvenile growth to variability of the physical environment	11.45
O:31	<i>Mohamed Elzeir and Steve Hay:</i> Investigating effect of circulation on jellyfish transport in the waters around Shetlands	12.00
O:01	<i>E.W. North, M. Christman, J. Volstad, R. R. Hood, T. F. Gross, L. Zhong, D. Lewis, M. Li, J. L. Manuel, R. I. E. Newell, and V. S. Kennedy:</i> Linking larval transport and fisheries demographic models to investigate the influence of environmental variability and larval behavior on oyster population growth and dispersal	12.15
	<b>Lunch break</b>	12.30
O:20	<i>Lewis S. Incze., Huijie Xue, Danya Xu, Yong Chen, Carl Wilson, David Greenberg, Robert Steneck, Minoru Kanaiwa, Peter Lawton, Randall Losier, Frederick Page, Richard Wahle, and Nicholas Wolff:</i> Multiple grid-scale model for egg production, larval transport, recruitment and fishery production for lobsters in the Gulf of Maine	13.30
O:38	<i>J.F. Caddy, E. Wade, T. Surette, M. Hebert, and M. Moriyasu:</i> Using an empirical traffic light procedure for monitoring and forecasting in the Gulf of St Lawrence fishery for the snow crab, <i>Chionoecetes opilio</i>	13.45
O:16	<i>J. Portela, J. Wang, M. Sacau, G. J. Pierce, M. B. Santos, and X. Cardoso:</i> Variability in the abundance of the argentine squid <i>Illex argentinus</i> in relation to environmental conditions on the High Seas of the Patagonian Shelf	14.00
O:24	<i>J. P. Jonasson, G. Thorarinsdottir, H. Eiriksson, and G. Marteinsdottir:</i> The effects of environment and fishing on the abundance and condition of Iceland scallop in Breidifjordur	14.15
O:35	<i>Pavel P. Chernyshkov, N.M. Timoshenko, and A.M. Sirota:</i> Physical-biological factors affecting recruitment of small pelagic fish off Northwest African coast	14.30
O:13	<i>Lauri Urho:</i> Environmental changes and varying conditions shape reproduction limits and interactions in the Baltic fish community	14.45
O:32	<i>A.I. Krysov and E.V. Sentyabov:</i> Biological and hydrographic aspects of the Norwegian spring-spawning herring migration variations before and after collapse in the 20th century	15.00

O:07	<i>Åse Husebø, Aril Slotte, and Arild Folkvord:</i> Growth differences in juvenile Norwegian spring-spawning herring ( <i>Clupea harengus</i> L.) related to temperature conditions in the nursery areas.	15.15
	<b>Coffee break</b>	15.30
O:25	<i>J. E. Stiansen, B. Bogstad, A. Aglen, E. Svendsen, H. Loeng, S. Mehl, and O. Nakken:</i> Including climate into the assessment of future fish stock recruitment using multiple regression models	16.00
O:03	<i>Yu. M. Lepesevich:</i> Abundance of Northeast Arctic haddock year classes and its governing factors	16.15
O:37	<i>Andrei S. Krovnin and G. P. Moury:</i> How climate affects year-class strength: case studies for three Northeast Atlantic commercial fish stocks	16.30

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Friday 23 September 13.30–15.30 (Gordon B Room)

- O:33 *Dimitrios Damalas, M. Apostolopoulou, C. Yannopoulos, and P. Megalofonou:* 13.30  
Environmental, spatio-temporal and operational effects on long-line swordfish catch rates in the Eastern Mediterranean Sea
- O:02 *H. A. Lizárraga-Cubedo, Tuck, I., Bailey, N., Pierce, G.J., Zuur, A. F., and Bova, D.:* 13.45  
Environmentally caused variability in the fluctuations of the European lobster, *Homarus gammarus*, fishery in Scottish coasts
- O:12 *H. A. Lizárraga-Cubedo, Tuck, I., Bailey, N., Pierce, G.J., and Zuur, A.F.:* 14.00  
Common trends in two populations of the European lobster, *Homarus gammarus*, in Scottish waters
- O:36 *Alexander M. Sirota, S.N. Burykin, and P.P. Chernyshkov:* Application of satellite altimetry for fisheries research 14.15
- O:39 *B.E. Scott, J. Sharples, O. Ross, and K. Camphuysen:* Hotspots: Marine top predator foraging habitat predicted from a detailed understanding of temporal and spatial oceanographic processes 14.30
- O:23 *S. Vaz, C. S. Martin, B. Ernande, P. D. Eastwood, F. Coppin, S. Harrop, G. J. Meaden, and A. Carpentier:* Modelling fish habitat suitability in the eastern English Channel 14.45

### Posters

- O:40 *Mario Pinho, J. Gonçalves, and O. Melo:* Abundance and potential fishing estimates of the deep-water red crab (*Chaceon affinis*) off the Azores  
Poster
- O:41 *Alexander Kempf, Jens Floeter, and Axel Temming:* Importance of variations in 0-group fish predation mortalities for recruitment success and implications for fisheries management  
Poster
- O:42 *Francisco Leotte, M. Guerra, C. Silva, and M. J. Gaudêncio:* Characterisation of bottom sediment on *Nephrops norvegicus* (Decapoda: Nephropidae) grounds off the southwest and southeastern coast of Portugal  
Poster
- O:43 *Jari-Pekka Pääkkönen, Sanna Rönkkönen, Miina Karjalainen, and Markku Viitasalo:* Growth of juvenile three-spined stickleback (*Gasterosteus aculeatus*) sublethally exposed to harmful algal blooms in the Baltic Sea  
Poster
- O:44 *Konrad Thorisson:* The spawning of cod (*Gadus morhua* L.) in Eyjafjordur, N-Iceland and the survival of its larvae  
Poster
- O:45 *D. Demain, A. Gallego, E. Jones, and I. Priede:* Temporal patterns of settlement and dietary changes of 0-group cod, haddock and whiting  
Poster
- O:46 *A. Carpentier, C. S. Martin, S. Vaz, B. Ernande, P. D. Eastwood, F. Coppin, P. Koubbi, G. J. Meaden, M. Walkey, N. Desroy, J. -C. Dauvin, Z. Kemp, J. -M. Dewarumez, A. Lefebvre, and S. Harrop:* Eastern Channel Habitat Atlas for Marine Resource Management (CHARM Phase I)  
Poster