

## Small-scale distribution of plankton and marine snow in the North Atlantic

Möller, K. O.; St. John, Michael; Christiansen, B.; Möllmann, Christian

Publication date: 2015

Document Version
Publisher's PDF, also known as Version of record

Link back to DTU Orbit

Citation (APA):

Möller, K. O., St. John, M., Christiansen, B., & Möllmann, C. (2015). Small-scale distribution of plankton and marine snow in the North Atlantic. Abstract from ICES Annual Science Conference 2015, Copenhagen, Denmark.

## General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

## Small-scale distribution of plankton and marine snow in the North Atlantic

<sup>1</sup>Möller K. O., <sup>2</sup>St.John M., <sup>1</sup>Christiansen B., and <sup>1</sup>Möllmann C.

Marine aggregates of biogenic origin, known as marine snow, are considered to play a major role in the oceans particle flux and may represent a concentrated food source for zooplankton. However, observing the marine snow-zooplankton interaction in the field is difficult, since conventional net sampling does not collect the vertical distribution of marine snow quantitatively. Hence, field evidence for the importance of the marine snow-zooplankton link is scarce. Here we employed a Video Plankton Recorder (VPR) to quantify small-scale vertical distribution patterns of fragile marine snow aggregates and zooplankton in the North Atlantic. We present data on zooplankton and particle small-scale distribution patterns during the transition from the convective winter regime to spring bloom conditions and provide indirect evidence of copepods feeding on marine snow aggregates by images suggesting a trophic interaction. Furthermore, we observed a potential impact of sinking marine snow aggregates on the diapause timing of Calanus finmarchicus and its ascend back to the surface. Finally, general changes in the taxonomic composition, abundance, and size structure of the zooplankton community have been observed. Our observations highlight the potential significance of marine snow in marine ecosystems and its potential as a food resource for various trophic levels from bacteria up to fish.

Keywords: Marine snow, Zooplankton, North Atlantic, Video Plankton Recorder (VPR), Calanus finmarchicus

Contact author: Klas Ove Möller (klas.moeller@uni-hamburg.de)

<sup>&</sup>lt;sup>1</sup>University of Hamburg / IHF, Grosse Elbstrasse 133, 22767 Hamburg, Germany

<sup>&</sup>lt;sup>2</sup>Technical University of Denmark (DTU), Jægersborg Allé 1, 2920 Charlottenlund, Denmark