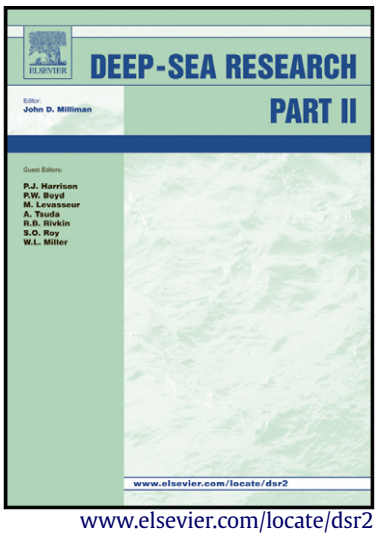

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PII: S0967-0645(13)00213-0
DOI: http://dx.doi.org/10.1016/j.dsr2.2013.05.022
Reference: DSRII3405

To appear in: *Deep-Sea Research II*

Cite this article as: Matthias F. Biber, Gerard C.A. Duineveld, Marc S.S. Lavaleye, Andrew J. Davies, Magda J.N. Bergman, Inge M.J. van den Beld, Investigating the association of fish abundance and biomass with cold-water corals in the deep Northeast Atlantic Ocean using a generalized linear modelling approach, *Deep-Sea Research II,* http://dx.doi.org/10.1016/j.dsr2.2013.05.022

Investigating the association of fish abundance and biomass with cold-water corals in the deep Northeast Atlantic Ocean using a generalized linear modelling approach

Matthias F. Biber[1,2,]*, *Gerard C.A. Duineveld*[1], *Marc S.S. Lavaleye*[1], *Andrew J. Davies*[2], *Magda J.N. Bergman*[1], *Inge M.J. van den Beld*[1]

[1]Royal Netherlands Institute for Sea Research, PO Box 59, 1790 AB Den Burg, Texel, The Netherlands

[2] School of Ocean Sciences, Bangor University, Menai Bridge, Anglesey, LL59 5AB, UK

* Corresponding author. *E-mail address*: mbiber@mail.com (M. Biber).

Running title: Fish and coral in the NE Atlantic

Abstract

Cold-water corals (CWC) can form complex three-dimensional structures that can support a diverse macro- and megafaunal community. These reef structures provide important biogenic habitats that can act as refuge, feeding, spawning and nursery areas for fish. However, quantitative data assessing the linkage between CWC and fish are scarce. The North Atlantic Ocean is a key region in the worldwide distribution of *Lophelia pertusa*, which is thought to be the most widespread frame-work forming cold-water coral species in the world. This study examined the relationship between fish and CWC reefs in the northeast Atlantic Ocean by means of video and remotely sensed data from three different CWC communities (Rockall Bank, Hatton Bank and the Belgica Mound Province). Using a tethered camera system, 37 transects were recorded during a period of 8 years. Fish-coral association was investigated using a generalized linear modelling (GLM) approach. Overall, *Lepidion eques* was the most