

Accepted Manuscript

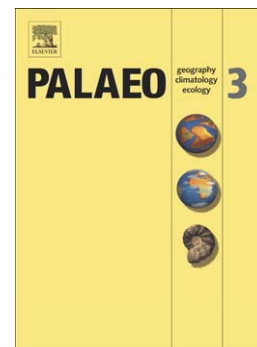
Climatic fluctuations and sea surface water circulation patterns at the end of the Cretaceous era: calcareous nannofossil evidence

Nicolas Thibault, Dorothée Husson

PII: S0031-0182(15)00425-3
DOI: doi: [10.1016/j.palaeo.2015.07.049](https://doi.org/10.1016/j.palaeo.2015.07.049)
Reference: PALAEO 7397

To appear in: *Palaeogeography, Palaeoclimatology, Palaeoecology*

Received date: 2 February 2015
Revised date: 14 July 2015
Accepted date: 29 July 2015



Please cite this article as: Thibault, Nicolas, Husson, Dorothée, Climatic fluctuations and sea surface water circulation patterns at the end of the Cretaceous era: calcareous nannofossil evidence, *Palaeogeography, Palaeoclimatology, Palaeoecology* (2015), doi: [10.1016/j.palaeo.2015.07.049](https://doi.org/10.1016/j.palaeo.2015.07.049)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Climatic fluctuations and sea surface water circulation patterns at the end of the Cretaceous era: calcareous nannofossil evidence

Nicolas Thibault¹, Dorothée Husson^{2,3}

¹Department of Geosciences and Natural Resource Management, University of Copenhagen, Øster Voldgade 10, DK-1350 Copenhagen K, Denmark. Email: nt@ign.ku.dk, Tel: +45 35323350

²Department of Earth and Planetary Sciences, Technological Institute, 2145 Sheridan Road, Evanston IL, 60208-3130, USA

³Sorbonne Universités, UPMC Univ Paris 06, UMR 7193, Institut des Sciences de la Terre Paris (iSTeP), F-75005 Paris, France

Abstract

New paleoecological data are presented for late Maastrichtian calcareous nannofossil assemblages of the Indian Ocean and the Boreal epicontinental Chalk Sea. These data are compiled with recent results in the tropical Atlantic, Pacific and Tethys oceans in order to characterize environmental changes by the end of the Cretaceous era. The paleobiogeographic distribution of the warm-water species *Micula murus* is updated and indicates the existence of major sea-surface currents in the late Maastrichtian Atlantic Ocean similar to the present day. The end-Maastrichtian greenhouse warming is characterized at tropical and sub-tropical latitudes by an increase in abundance of *Micula murus* and the temporary disappearance of the high-fertility marker *Biscutum constans*. In the Boreal realm, the greenhouse episode is marked by a contemporaneous acme of *Watznaueria barnesiae* coincident with very rare occurrences of *M. murus* and other tropical nannofossil species which have never been reported before at boreal latitudes. A review of cyclostratigraphic and

Download English Version:

<https://daneshyari.com/en/article/6349281>

Download Persian Version:

<https://daneshyari.com/article/6349281>

[Daneshyari.com](https://daneshyari.com)