



Seasonal variation of copepod communities in the Senegal-Gambia waters

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Reçu le 13/12/2016; publié le 15/03/2017
AWA © MS WP2_S2_70

Abstract

The analysis of the seasonal variation of copepods in the Senegal-Gambia maritime area, using a comparative approach (cold season (May) and warm season (November)) was carried out using data collected during ecosystem cruises aboard the Norwegian vessel Fridtjof Nansen in November 2011 and May 2012. Zooplankton samples were collected between 0 and 50 m depth using a multinet of 80 µm mesh, towed obliquely behind the vessel, over the continental shelf. Post processing of the samples (n = 34) were made in laboratory by microscopy and the copepod were identified to the lowest possible taxonomic level and counted, using appropriate identification keys. *Paracalanus parvus* was dominant with 22 % followed by *Oncaea venusta* (19 %) and *Temora stylifera* (12 %) in the cold season. In contrast, in the warm season, these two species (*P. parvus* *O. venusta*) still dominant with 26% and 13 %, respectively. A total of 34 species of copepods were identified during the cold season, compared with 27 species during the warm season. In one hand, during the cold season, an area of high concentration of copepods was found off the mouth of the Casamance River. On the other hand, during the warm season, two areas of high concentration were identified off the peninsula of Cap-Vert and Casamance. The copepod group which represents 2/3 of the zooplankton would be an ideal indicator for the identification of signatures of changes in phenology and / or latitudinal displacement of species in relation to climatic variations. All of these aspects reflect the interest of this study in improving knowledge of the responses of marine organisms to climate change in the south part of the west African east border upwelling.

Keywords: Seasonal variation, Copepods, Upwelling, Maritime area, Senegal, Gambia.



Commission Sous-Régionale des Pêches
Sub-Regional Fisheries Commission



International Conference ICAWA 2016

Extended book of Abstract

THE AWA PROJECT
Ecosystem Approach
to the management
of fisheries and the
marine environment
in West African waters

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Gambie

Guinée BISSAU

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ISBN: 978-2-9553602-0-5



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EDITED BY:

Patrice BREHMER (IRD-France; Dakar), Babacar BA (CSRP, Sub-Region; Banjul) & Gerd KRAUS (TI, Germany; Hamburg).

TECHNICAL SUPPORT: Marie Madeleine GOMEZ (CSRP), Ndagoue DIOGOUL (IRD-UCAD).

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Bamol Ali SOW , Alban LAZAR, Heino FOCK, Xavier CAPET, Aka Marcel KOUASSI, Idrissa Lamine BAMY, Osvaldina SILVA, Eric MACHU, Vamara KONE, Moustapha DEME, Didier JOUFFRE, Joern SCHIMDT, Modou THIAW, Suzanne TRAORE, Abdoulaye DIOP, Justine DOSSA, Didier JOUFFRE, Ibrahima DIALLO, Arnaud COMOLET, Zacharie SOHOU, Hamet DIADHOU, Célestin BLE, Rafael ALMAR, Moussa SALL, Abou BAMBA, Dano J.A. ROELVINK, Ibrahima LY, Marie BONNIN , Dienaba Beye TRAORE, Adama MBAYE, Hassane Dedah FALL, Mohamed M'barek O. SOUEILIM.

ISBN: 978-2-9553602-0-5

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COVER DESIGN: AWA (BMBF – IRD) project

LOGO AND FLYERS: Laurent CORSINI (IRD)

TRANSLATION: Amadou NDIONE (independent)

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