

Ulrike Braeckman

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PERSONALIA

First name: Ulrike
Date of Birth: 4 October 1982
Nationality: Belgian

Surname: Braeckman
Place of Birth: Ghent
Civil status: Married, 1 son

OBJECTIVE

A postdoctoral position in marine ecology, preferably in the field of benthic biogeochemistry, entailing the following activities:

- Experimental work and modelling of the interaction between macrofauna and biogeochemistry
- Experimental work and modelling of the influence of external factors on this interaction
- Guidance of master students and PhD students

EDUCATION

PhD in Science, Biology 25/03/2011
Ghent University
THESIS:
Macrobenthos structuring the sea floor: Influence of its functional biodiversity for the benthic ecosystem
Promotor: Prof. Dr. M. Vincx
Co-promotor: Prof. Dr. K. Soetaert
Supervisor: Dr. J. Vanaverbeke

Master in Marine and Lacustrine Sciences 2005-2006
Ghent University high distinction
THESIS:
*The impact of beam trawl fisheries on the fauna associated with *Lanice conchilega* reefs. An in situ experiment*
Promotor: Dr. S. Degraer
Co-promotor: Prof. Dr. M. Vincx
Supervisor: M. Rabaut

Master in Biology, zoology 2003-2005
Ghent University high distinction
THESIS:
Macrofauna from the North Sea: Impact of bottom trawling on the diversity of benthic fauna.
Promotor: Dr. S. Degraer
Co-promotor: Prof. Dr. M. Vincx
Supervisor: A. Goffin

1st Master attended at Université de Montpellier II, France, 2003-2004
in the framework of a Socrates (Erasmus) project high distinction

Bachelor in Biology 2001-2003
Ghent University high distinction

Secondary education

One year of intercultural exchange with the AFS program in a host family in Paraguay 2000-2001

Koninklijk Lyceum II, Ghent: Latin-Mathematics 1994-2000

RESEARCH EXPERIENCE

Post-doc research on benthic ecosystem functioning (biogeochemistry) 2011 – continued
in the (Belgian part of the) North Sea Ghent University

- assessing spatial and temporal variation in sediment-water fluxes of oxygen, nutrients and alkalinity
- ocean acidification and temperature effects on sediment-water fluxes in contrasting sediments
- basin-wide assessment of sediment-water fluxes and oxygen and pH profiles in the North Sea in the framework of ocean acidification research
- effect of glacial melting on the food web (mainly meio – and macrobenthos) in the Antarctic

PhD research 01/10/2006 -25/03/2011
Ghent University

My PhD is entitled “*Macrobenthos structuring the sea floor: Influence of its functional biodiversity for the benthic ecosystem*” and fits within the framework of the Westbanks-project (2006-2010), a cooperation between the Marine Biology Research Group at Ghent University, NIOO-CEME (Yerseke, NL) and KUL, INBO and MUMM. This project aimed at understanding benthic, pelagic and airborne ecosystem interactions in shallow coastal seas.

- Experimental work on and modelling of the influence of selected macrobenthic species on biogeochemistry
- Experimental work on the interaction between macro- and meiobenthos: taxonomy and stable isotopes
- Characterisation of macrobenthos and its possible planktonic and benthic food sources by means of fatty acids
- Valorisation of scientific results through the governmental Westbanks- and European Habitat-project: selection of new areas for marine protection

EXPERIMENTAL AND LABORATORY TECHNIQUES

- Sediment core incubations
- Oxygen and pH microprofiling with Unisense electrodes and Pyroscience optodes (only oxygen)
- Winkler titrations (oxygen)
- Gran titration (total alkalinity)
- Nutrient and pigment analysis
- MIMS measurements for N₂:Ar ratios
- Use of luminophores for bioturbation assessment
- Mass budget modelling (in cooperation with Karline Soetaert and Dick van Oevelen at Royal NIOZ Yerseke, NL) to estimate unmeasured nitrification and denitrification rates
- Extraction of fatty acids and analysis of chromatograms
- Extraction, sorting, slide preparation and identification of meiobenthos
- Sorting and identification of macro-, hyper- and epibenthos (including fish)

TEACHING EXPERIENCE

Supervision:

- PhD Maryam Yazdani Foshtomi (2011 – 2014) : Biotic interactions across size classes as structuring factors for marine benthic ecosystem functioning
- internship Joris Bril (Ba Chemistry – Environmental management): “Ocean Acidification and Temperature effects on contrasting sediment types” February - June 2012
- internship Sofie Jacob (Ba Chemistry – Environmental management): “Functioning of the benthic ecosystem in the Belgian part of the North Sea” February - June 2011
- Msc Thesis Sonila Gogo (Erasmus Mundus Msc in Marine Biology and Conservation): “A first evaluation of the biodiversity of a possible Marine Protected Area on the Belgian part of the North Sea” 2009-2010
- Research Project Jens Frickel (Msc Oceans and Lakes): “Influence of macrobenthos on the vertical distribution of nematodes” October 2008 – April 2009
- Ba Dissertation Dagmar Storms (Ba Biology): “Influence of prey-presence on bioturbation activity of *Nephtys hombergii*” March-April 2008

- undergraduate lab courses in biostatistics, ecosystem functioning, animal biodiversity, invertebrates and histology
- undergraduate students (Msc EMBC, Msc Oceans and Lakes, Ba and Msc Biology) at RV Simon Stevin, RV Belgica and RV Zeeleeuw campaigns (single to multi-day excursions) and at one-week traineeships in Wimereux (F).

SAMPLING CAMPAIGNS

- IMCOAST Expedition to Jubany (Carlini) station on the Antarctic peninsula (AWI Dallmann) (ANT – Land 2011/2012, KGI): 15/2-10/3/2012 with Prof. Dr. Ann Vanreusel: effects of glacial melting on meiobenthic food dynamics and respiration (experiments) and macrobenthic position in the food web (stable isotope sampling)
- North Sea Acidification sampling campaign RV Pelagia (64PE344): 1-26/09/ 2011 (Royal NIOZ–NIOO-UU–Dalhousie University cooperation): basin wide assessment of sediment-water fluxes of oxygen, alkalinity, nutrients, N₂:Ar, DIC and Fe/Mn
- > 25 1-day campaigns with RV Zeeleeuw for PhD and post-doc research in the Belgian part of the North Sea (2006 – 2012)
- RV Belgica Monitoring campaign October 2006, 2007, 2008: meio- , macro- , hyper- and epibenthos sampling in the Belgian part of the North Sea
- MSc thesis sampling campaign in the intertidal zone of Boulogne-sur-mer (Fr): February – March 2006; intertidal beam trawl disturbance experiment and macrobenthos sampling
- RV Tridens ICES Beam Trawl Survey in the framework of undergraduate thesis and EU MAFCONS project: 20/08 – 03/09/2004; macro – and epibenthos sampling and beam trawling in the western part of the North Sea

WORKSHOPS – COURSES – TRAINEESHIPS

- Westbanks symposium ‘the North Sea: a field lab for Marine Protection’, Leuven (Belgium): 22/03/2011
- Tracing Energy Transfer in Aquatic Ecosystems: recent techniques and applications, Ghent: 28-30/09/2009
- International Winter School – University of Bologna: detecting biological and environmental changes: design and analysis of monitoring and experiments. Bologna, Italy: March 2008. Course on experimental design, Primerv6, Permanova+
- Workshop MANUELA: Experimental techniques with meiofauna in Hel, Poland: September 2006

- Academic English: conference skills course, UCT Ghent: 2007, writing skills course: 2009

- Sampling for Survey and Monitoring, UGent: 22-23/09/09
- Symposium ' A Future for Fisheries', Leuven (Belgium): 04/02/08
- Linear Regression, IPVW UGent: 2007-2008
- Ecological modelling with R, course within the MSc program Marine and Lacustrine Sciences: 2007
- Msc Biology Training Morphology and Systematics of Marine Invertebrates in Wimereux (Fr): Sept 2004
- Msc Biology Training Ecology in Buzenol (B): June 2004

PEER REVIEWER FOR

Marine Environmental Research [1], Journal of Experimental Marine Biology and Ecology [1], Aquaculture International [1], Environmental Science and Technology [1], Hydrobiology [1], Biogeosciences [1], Marine Biology [1], Journal of Sea Research [1], Biodiversity and Conservation [1]

LANGUAGE SKILLS

Dutch	native
English, Spanish, French	reading/understanding, speaking/writing: very good
German	reading/understanding, speaking/writing: moderate, but in progress!
Italian, Portuguese	reading/understanding, speaking/writing: basic

COMPUTER SKILLS

Microsoft Word, Excel, Powerpoint, Access, R, Statistica, Primer v6, Permanova+,GIS (basic mapping), the WWW

VARIA

Drivers licence B
 Scuba Diving License - CEMAS Diver 2*
 Survival at Sea according STCW'95

From January 1st – May 31st 2013 in maternity leave.