BLUE MISSION BANOS

1st MISSION ARENA
14-16 November 2023 | Gothenburg, SE

MULTI-USE TECHNOLOGY ROADSHOW – Monitoring tech

Annelies Declercq – Ghent University

Lab of Aquaculture and Artemia Reference Center – Faculty of Bioscience Engineering

THEME: **UNITED FINAL EVENT**

GHENT UNIVERSITY

UNITED

Funded by the European Union (H2020 Grant Agreement no 862915).Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them

#MissionArenaBANOS1

EU MISSIONS RESTORE OUR OCEAN & WATERS

Funded by the European Union

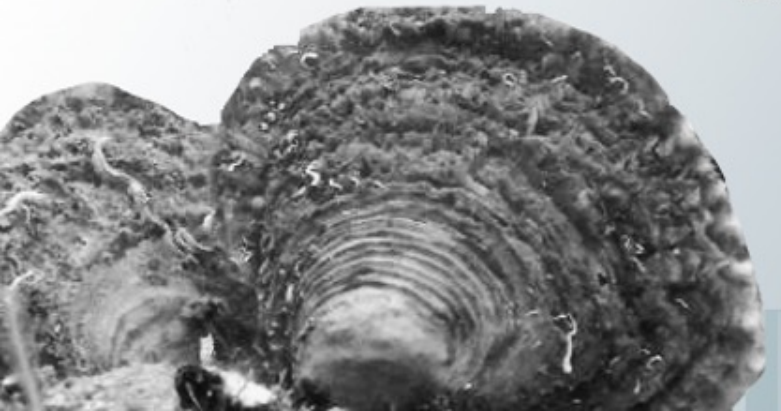
Biological monitoring

Annelies Declercq, Thomas Kerkhove, Francis Kerckhof, Tofael S. Ahmed

This Project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement no 862915

Research objectives

- ✓ Characterize the fouling biodiversity associated with flat oysters
- ✓ Determine the presence and prevalence of *Bonamia* and *Marteilia* parasites in the BPNS



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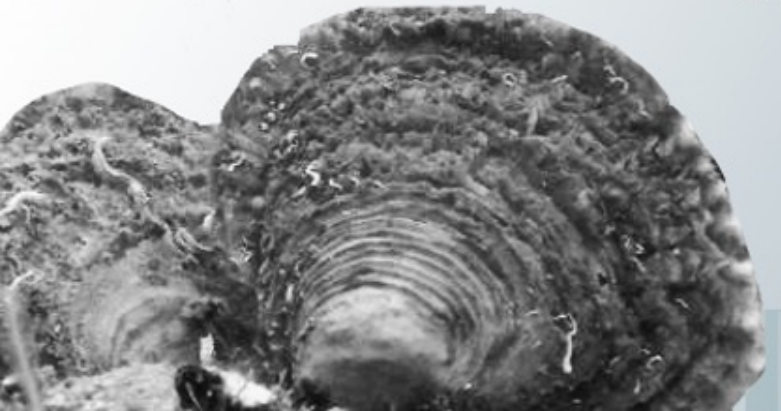

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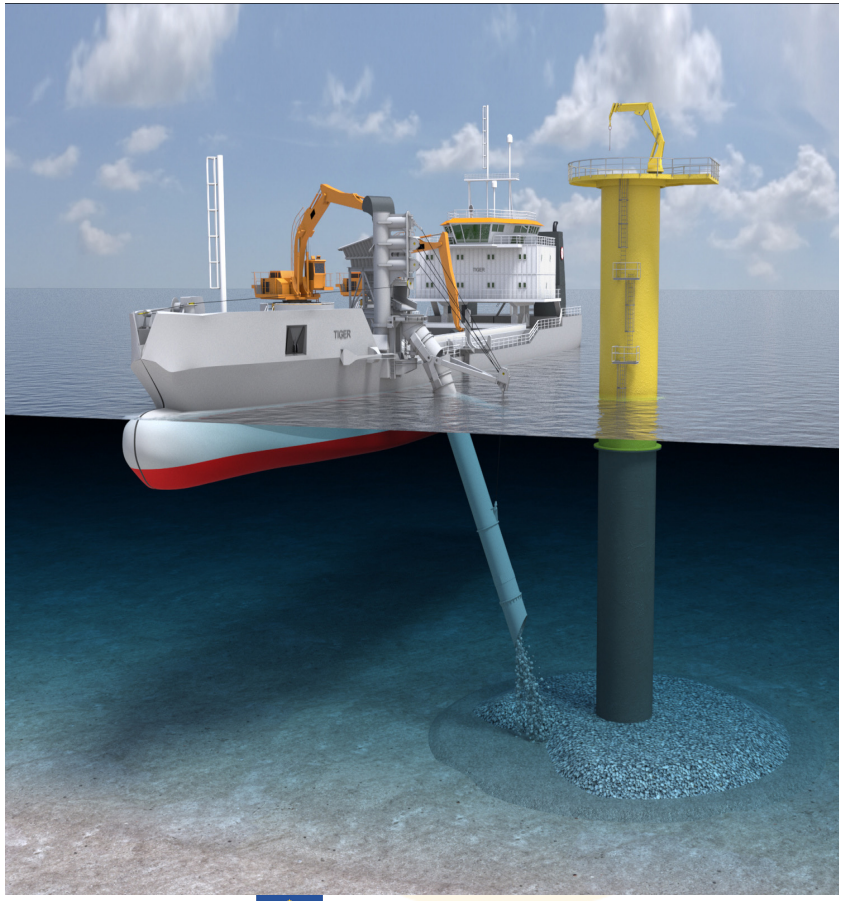
Fouling in nature inclusive design - scour protection near- and offshore

- Materials implemented and monitored : rock material placed around a monopile foundation as protection
- Different scour protection materials, orientation to turbines and addition of brood stock investigated for their ability to support biogenic reef formation



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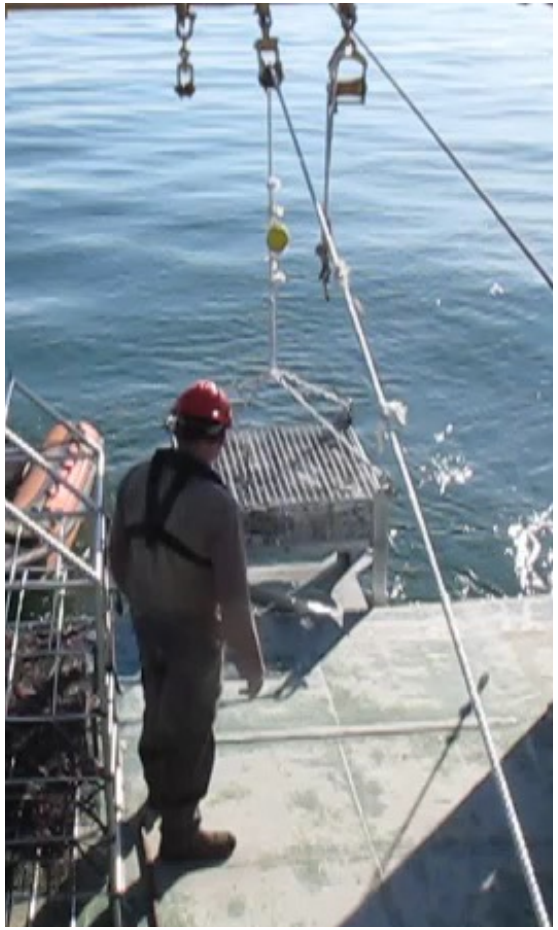
Nearshore versus offshore installation and sampling - restoration



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Video fragment from UNITED diving campaigns in Belwind ©Alain Norro

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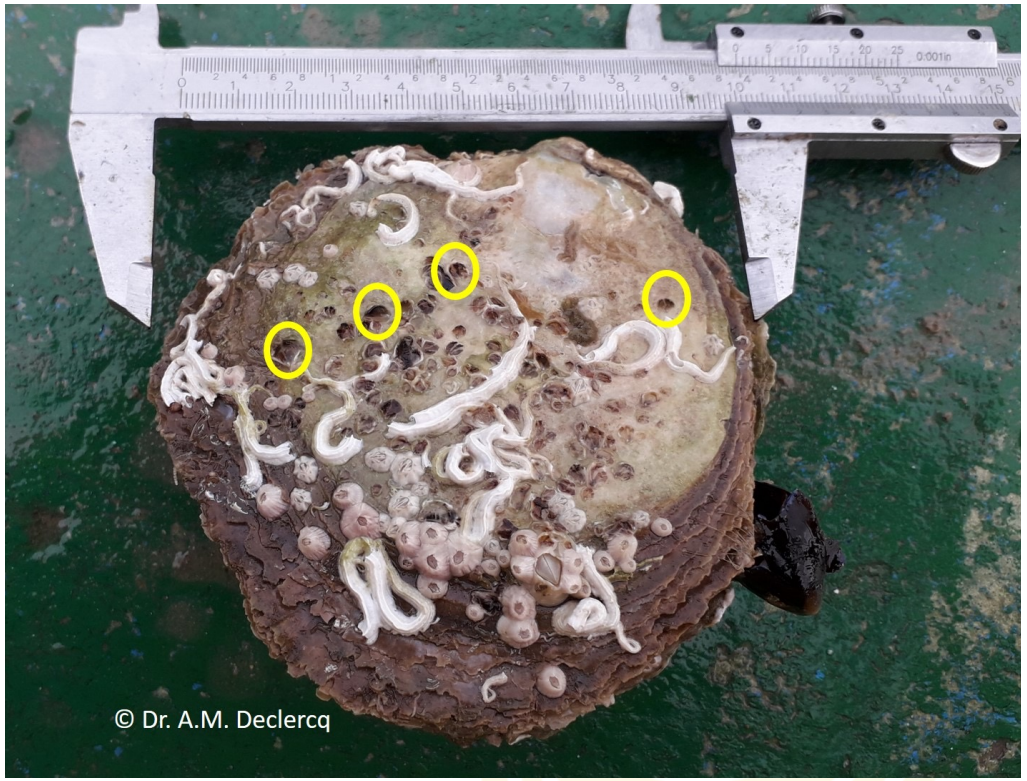
Succes of restoration structures - settlement of Ostrea edulis *spat*



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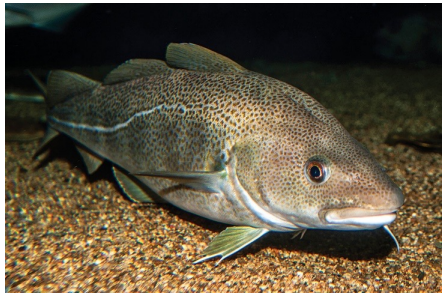
Biology – Oyster restoration structures

- Embryonic reef formation by *Sabellaria spinulosa*
- Timing of installation of 'clean' hard substrates is of importance for successful settlement
- Also relevant for other species Atlantic cod (*Gadus morhua*) and European lobster (*Homarus gammarus)*
- Support biodiversity of offshore wind farm areas



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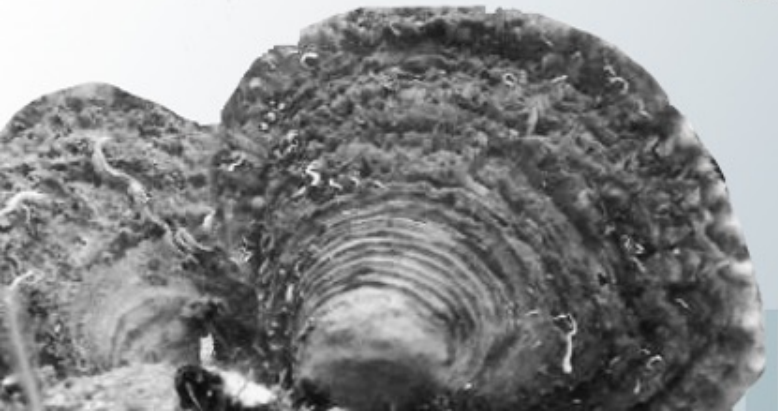

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Methodology

Dissection and DNA sample preparation

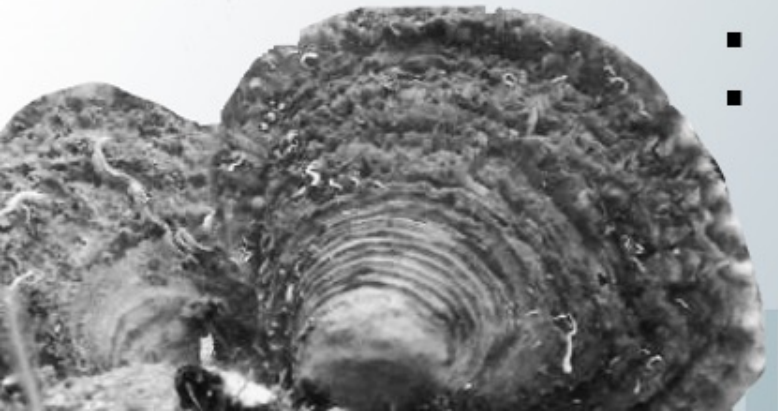
DNA extraction and Nanodrop measurement

multiplex qPCR Analysis to detect two parasites at the same time

Confirmation

Histology

- Opened with oyster knife
- Muscles and/or tissues removed
- Divided into two (histology & qPCR)



Methodology

Preventive Veterinary Medicine 183 (2020) 105126

Contents lists available at ScienceDirect

Preventive Veterinary Medicine

journal homepage: www.elsevier.com/locate/prevetmed

A new multiplex real-time PCR assay to improve the diagnosis of shellfish regulated parasites of the genus *Marteilia* and *Bonamia*

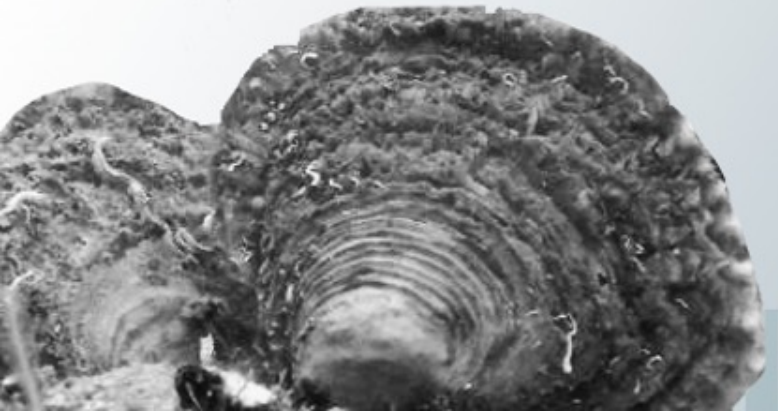
Lydie Canier *, Christine Dubreuil [1], Mathilde Noyer, Delphine Serpin, Bruno Chollet, Céline Garcia, Isabelle Arzul

Ifremer, RBE-SG2M-LGPMM, Station de La Tremblade, Avenue de Mus de Loup, F-17390 La Tremblade, France

Detection of *Bonamia* and *Marteilia* parasites

All Negative!

No *Bonamia* and *Marteilia* parasites detected in the mollusk samples




The Team

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