

# Effects of invasive species on native predator-prey and pathogen-host webs

*Introduction to the project*

David Thieltges et al.



Royal Netherlands Institute for Sea Research



ALFRED-WEGENER-INSTITUT  
HELMHOLTZ-ZENTRUM FÜR POLAR-  
UND MEERESFORSCHUNG

# Project background

## 100 OF THE WORLD'S WORST INVASIVE ALIEN SPECIES

A SELECTION FROM THE GLOBAL  
INVASIVE SPECIES DATABASE



Sponsored by



Contribution to the Global Invasive Species Programme (GISP)



SPECIES SURVIVAL COMMISSION

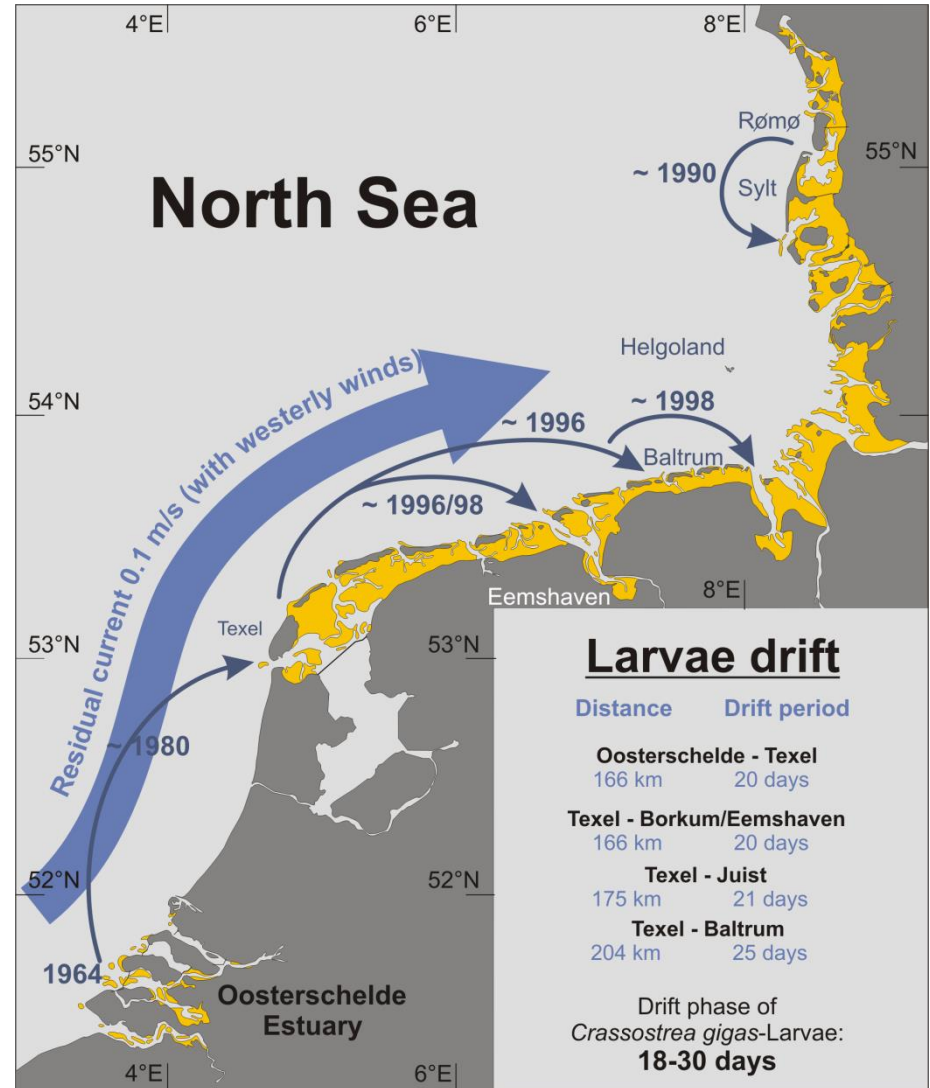
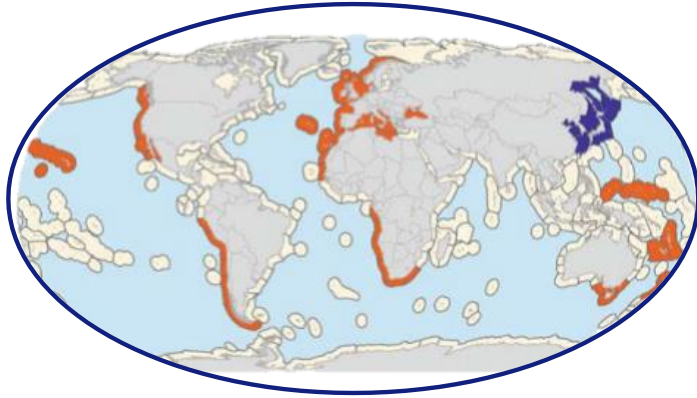
Published by



The Wadden Sea's worst  
invasive alien species



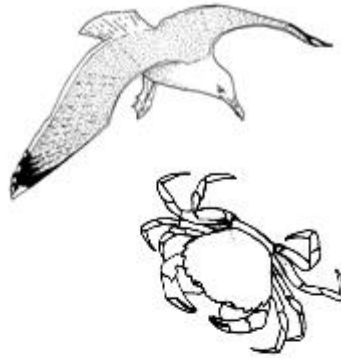
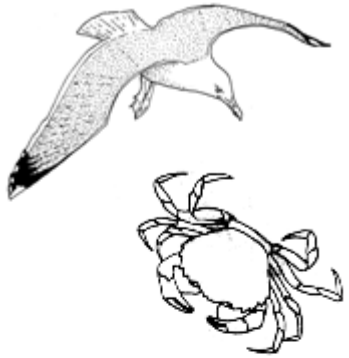
# Biorisk: Pacific oyster (*Crassostrea gigas*) invasion



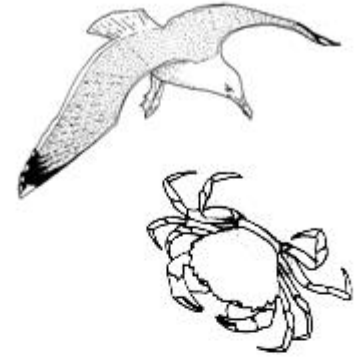
Source: Achim Wehrmann /  
Senckenberg Research Institute

# Impact on predator-prey interactions

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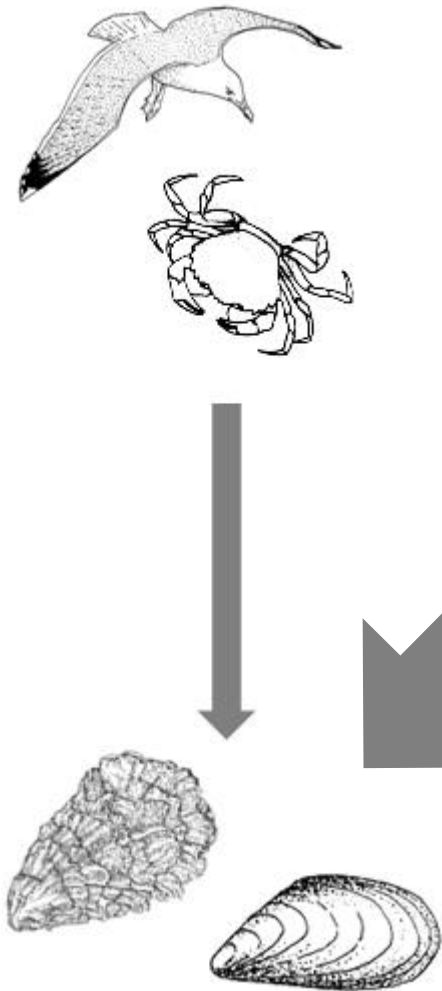


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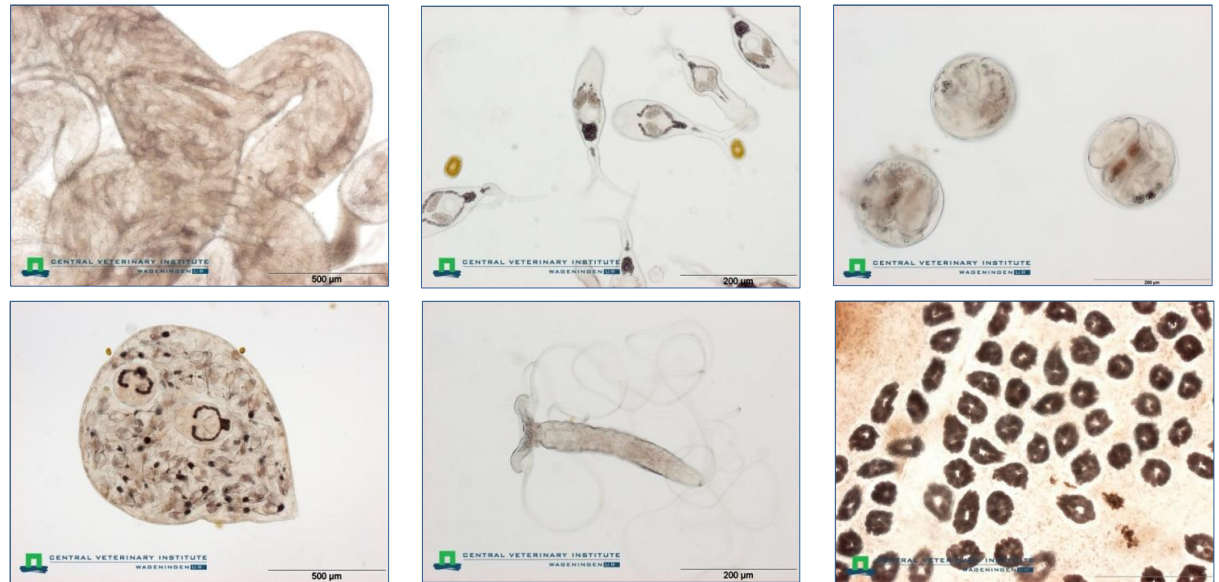


# Impact on pathogen/parasite-host interactions

## Predators



## Pathogens & parasites

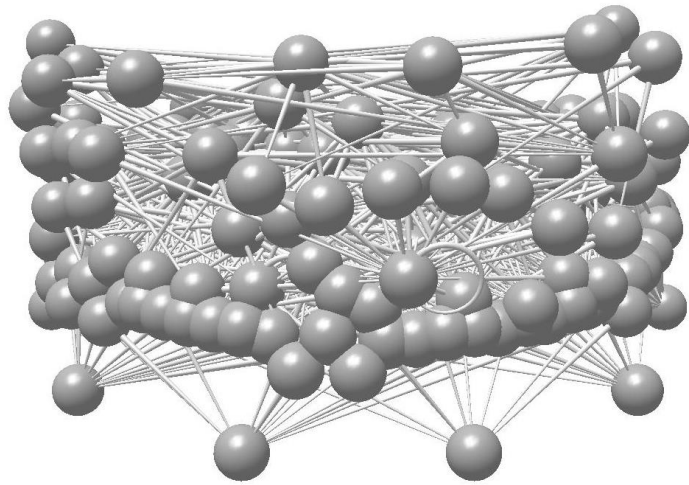
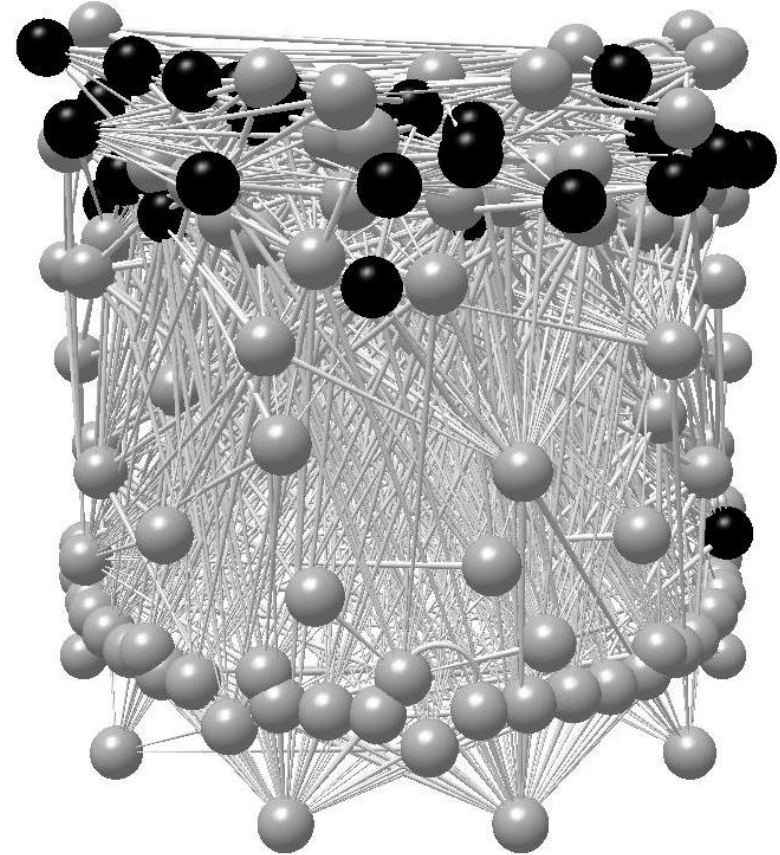
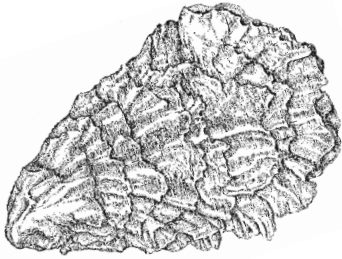


# Impact on interaction (not energy flow) food web

## Wadden Sea food web

Thieltges et al. (2013) J Sea Research

Dunne et al. (2013) PLoS Biology



Without parasites

With parasites

# The project & partners



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## Impact on parasite-host web

David Thieltges, Pieterella Luttikhuis (NIOZ)  
Mathias Wegner (AWI)  
Anouk Goedknecht (PhD student)  
Master students

## Impact on predator-prey web

Christian Buschbaum (AWI)  
Kees Camphuysen (NIOZ)  
Master students

## Synthesis: impact on food web

All partners

## Other projects of the partners

PhD & MSc projects

## General pathogen inventory

CVI Lelystad, mollusc disease group

## Links to the other Biorisk project

e.g. flow versus interaction webs

## Workshop invasive species in the Wadden Sea (2015/2016)