The importance of *Lanice conchilega* reefs in trophic linkages on intertidal sandy beaches

Marine Biology
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Intro

The presence of healthy and abundant food webs are crucial to ensure the survival of species. Monitoring the status and the trends of marine food webs is essential in order to collect information needed to assess the current situation and implement the necessary conservation measures. The tube-building and reef-forming polychaete ***Lanice conchilega*** was shown to be very useful within a conservation context. The reefs are known to promote benthic community change and constitute feeding grounds for secondary consumers.

Aims

Trophic linkages in intertidal biogenic reefs are poorly or only partially investigated. Our research aims at investigating the structuring role of *L. conchilega* reefs - as an example of a biogenic reef - in the overall intertidal sandy beach food web. Moreover, the trophic relations between *L. conchilega* and both lower and higher trophic levels will be unravelled while taking into account spatial and temporal variability.

How?

- ✓ 3 sampling locations (*Fig.1)*, each with a *L. conchilega* reef site and a non-reef (control) site
- ✓ Analysing environmental variables (e.g. median grain size)
- ✓ Characterising reef and non-reef food web compartments
  - Quantitative & qualitative analysis of primary resources (SPM, TOM, MPB)
  - Community analysis of macro-, hyper-, and epibenthos
  - Bird counts
- ✓ Quantifying trophic linkages
  - Stomach content analysis
  - Conventional & genetic faecal analysis
  - Stable isotope analysis
  - Describing the food web via linear inverse models (LIM)

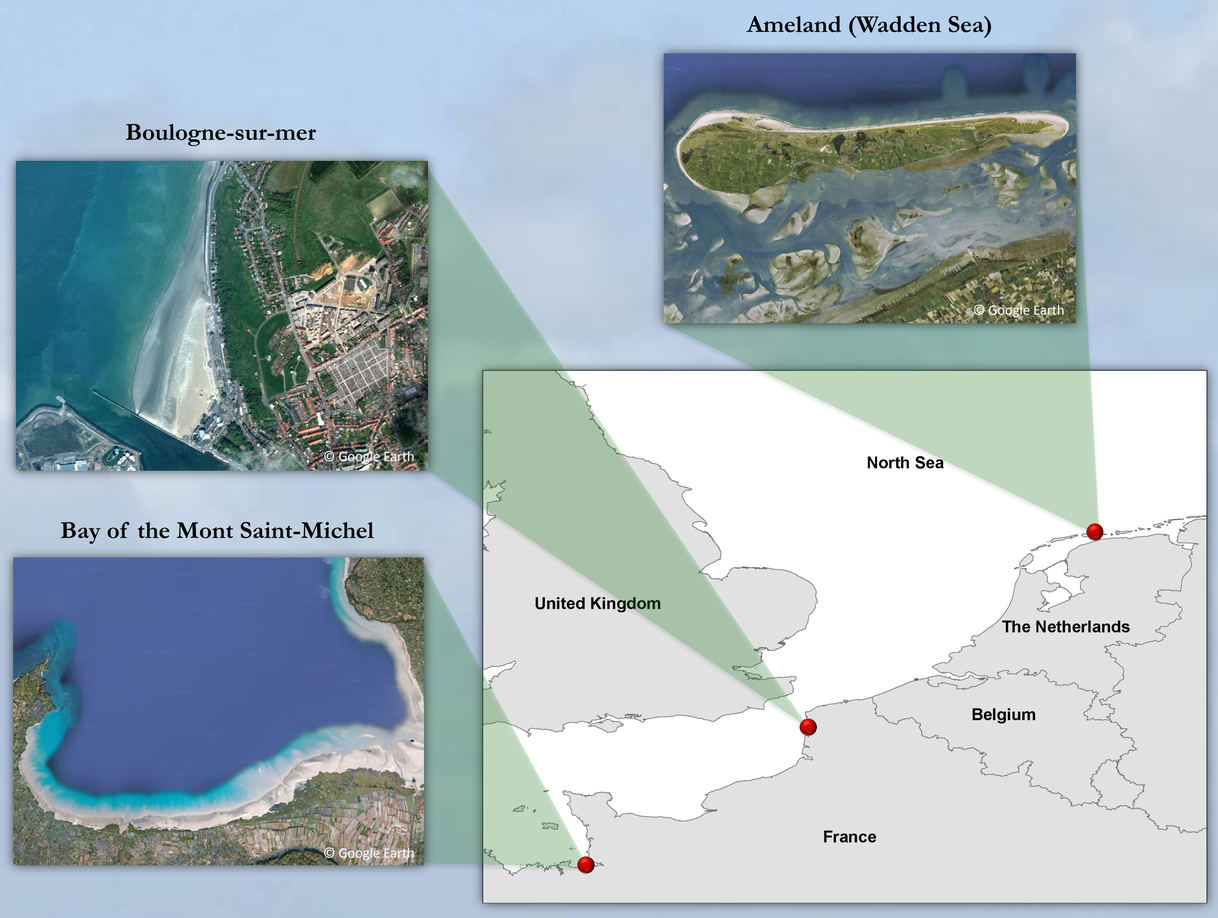
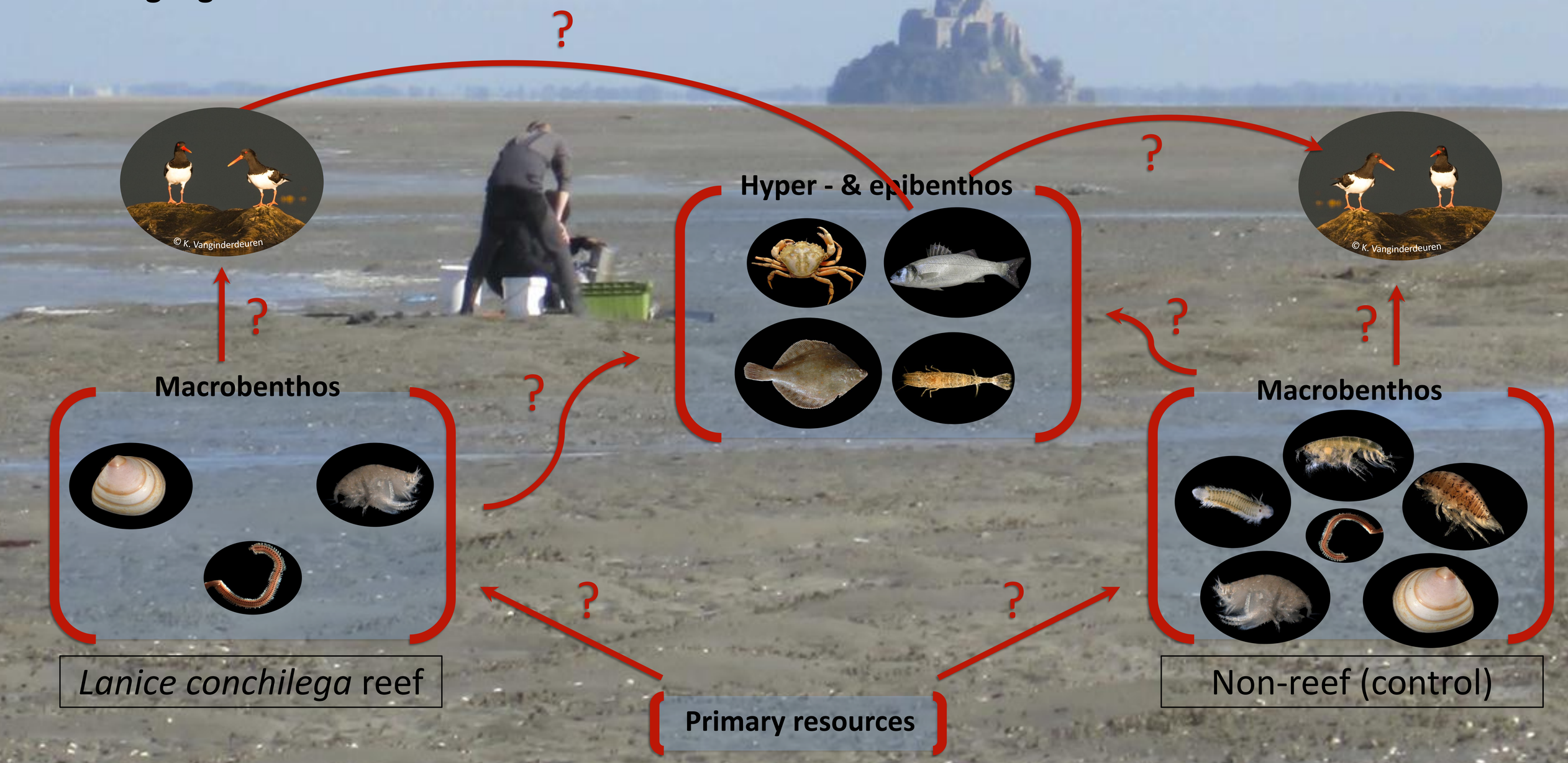


Fig. 1 Three sampling locations along the Northeast Atlantic coast

Untangling the web…



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Macro-, hyper-, and epibenthos photographs: © Hans Hillewaert