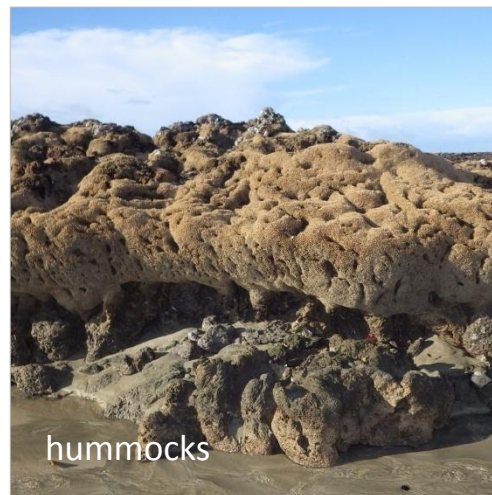
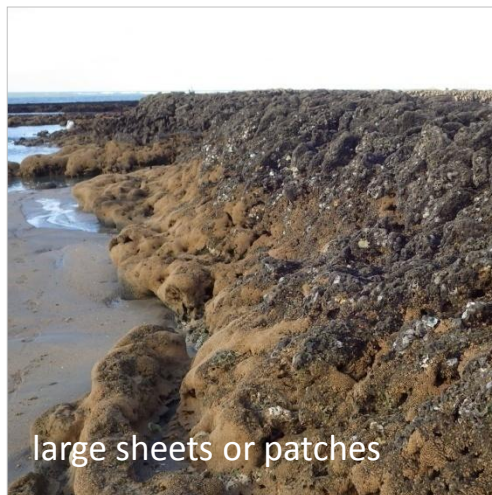
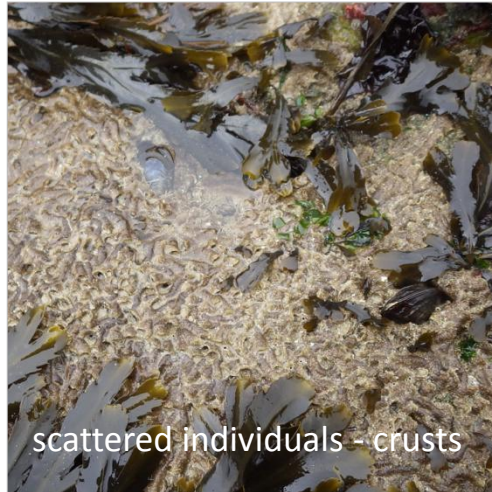


Atelier 'Hermelles'



Presentation Atelier 'Hermelles'

Assessment of the distribution and
ecological status of *Sabellaria alveolata*
reef habitats in Europe



Rationale (Ecology)

Engineer species = “Organisms that directly or indirectly modulate the availability of resources to other species” [Jones et al., 1994 OIKOS]

Very common in coastal marine systems

Reefs provide a number of important ecosystem services globally, including coastal protection and important habitat for a wide range of organisms [Arkema et al. 2013]



Reefs and reef organisms are under heavy anthropogenic impacts (both direct and indirect) [e.g. Goldberg 2013]

Rationale (Legal)

‘reefs’ are recognized as a **marine habitat to be protected** and are listed under Annex I of the EC Habitats Directive (Council Directive EEC/92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora) under the designation of Special Areas of Conservation (SACs).

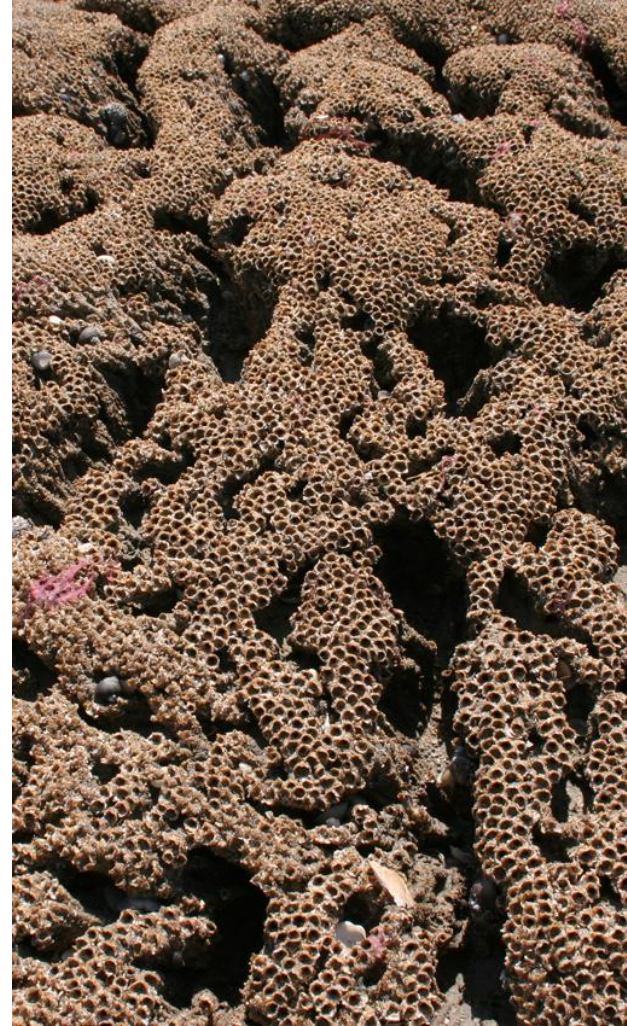


improving and protecting the ‘**good ecological status**’ of marine habitats has been identified as a priority for the Marine Strategy Framework Directive (MSFD).

What’s a ‘reef’ ?

Biological model

The honeycomb worm *Sabellaria alveolata* (Polychaeta: Sabellariidae)
Sabellaria reefs are among the key habitats listed under Annex I of the Habitats Directive



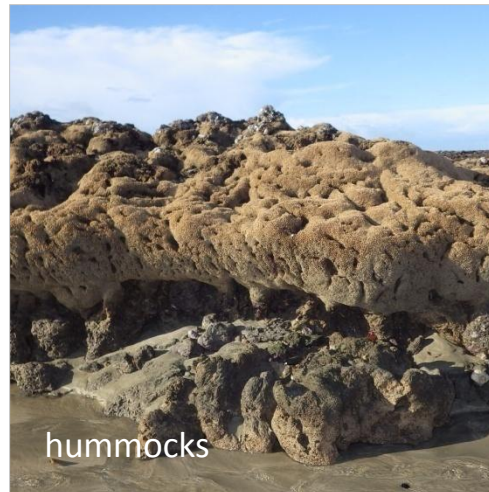
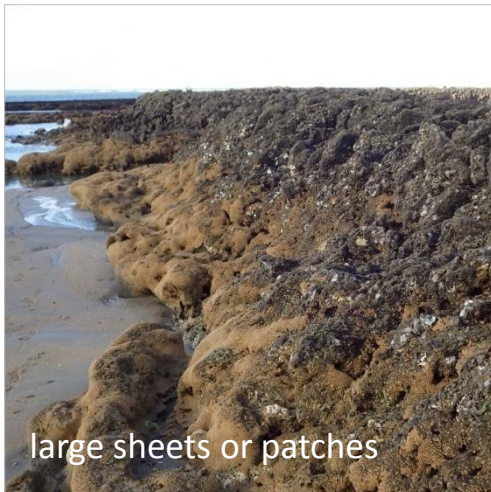
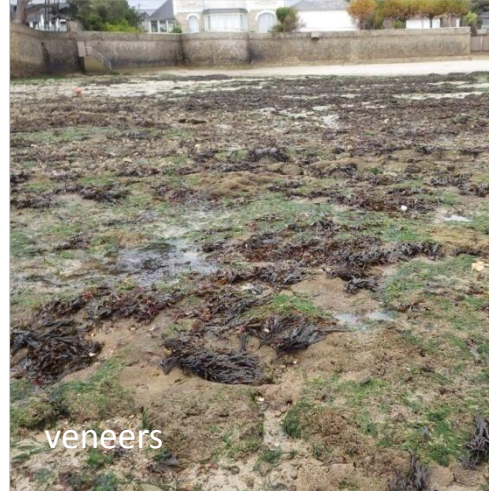
Biological model

Rocky and sandy substrates – over 2 m high – thousands of hectares in Europe

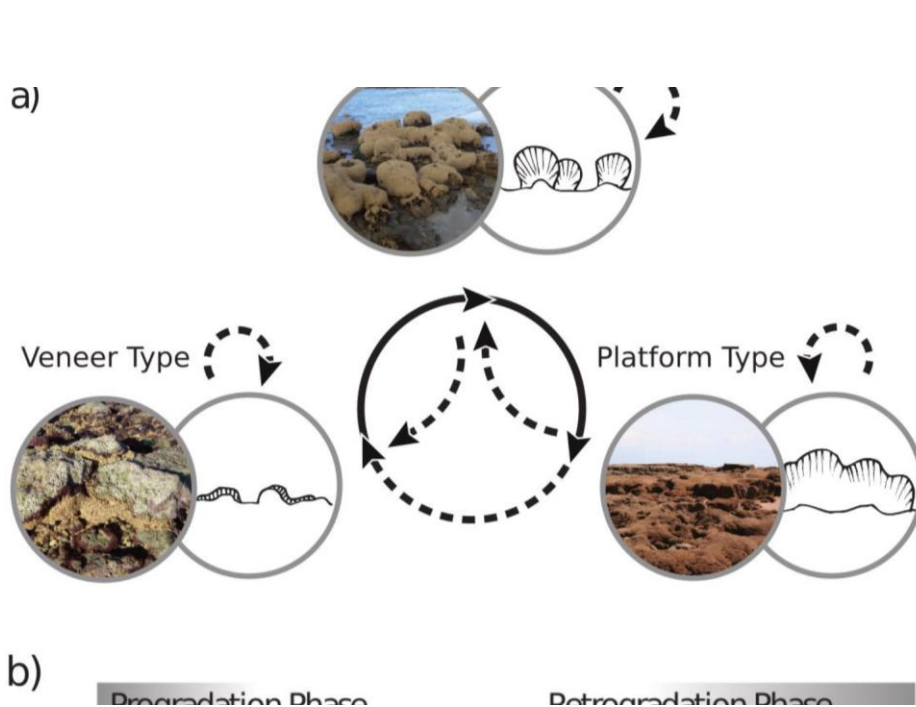


Biological model

Mostly on hard substrata – great variety in shapes



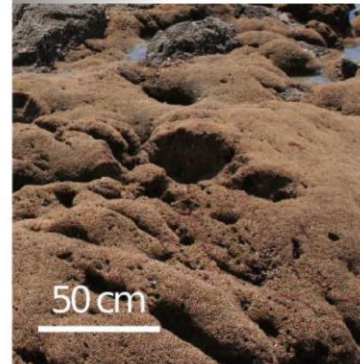
Biological model



b)

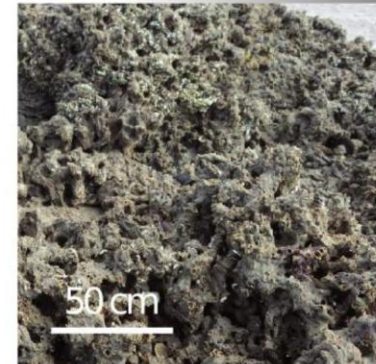
Progradation Phase

- Dominated by occupied tubes identified by porches
- Limited/No epibionts
- Uniform aspect
- Presence of small tube openings (aperture < 2.5 mm) indicating recruitment
- Surface of reef of similar colour to surrounding sediment



Retrogradation Phase

- Mosaic of occupied and unoccupied tubes (identified by lack of porches)
- Often featuring epibionts/biofilms
- Signs of reef erosion
- No visible small tube openings (aperture < 2.5 mm)
- Surface of reef highly fragmented and dark brown to grey in colouration



Question & objective

What is a *Sabellaria alveolata* reef and can we address the **ecological status** of *S. alveolata* bioconstructions?

Link the health of an engineer species with the health of the biogenic structure = Test the hypothesis that a **healthy bioconstruction** (*i.e.* exhibiting growing phases) is built by **healthy worms** (*i.e.* exhibiting good physiological status).



Framework & work packages



1

Produce European maps of past and present distribution of *Sabellaria alveolata* bioconstructions

2

Monitor *Sabellaria alveolata* bioconstructions and potential competitors with sustained observations

3

Measure *Sabellaria alveolata* health through physiology metrics

4

Establish how biotic and abiotic factors affect the distribution of *Sabellaria alveolata*

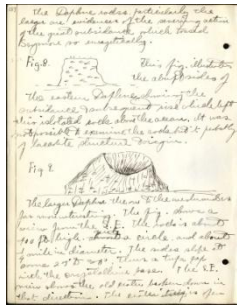
5

Develop a generic and universally applicable health index for *S. alveolata* bioconstructions

Objective #1 - Produce European maps of global past and present distribution of *Sabellaria alveolata* bioconstructions

Obj. 1 – European map of past and present distribution

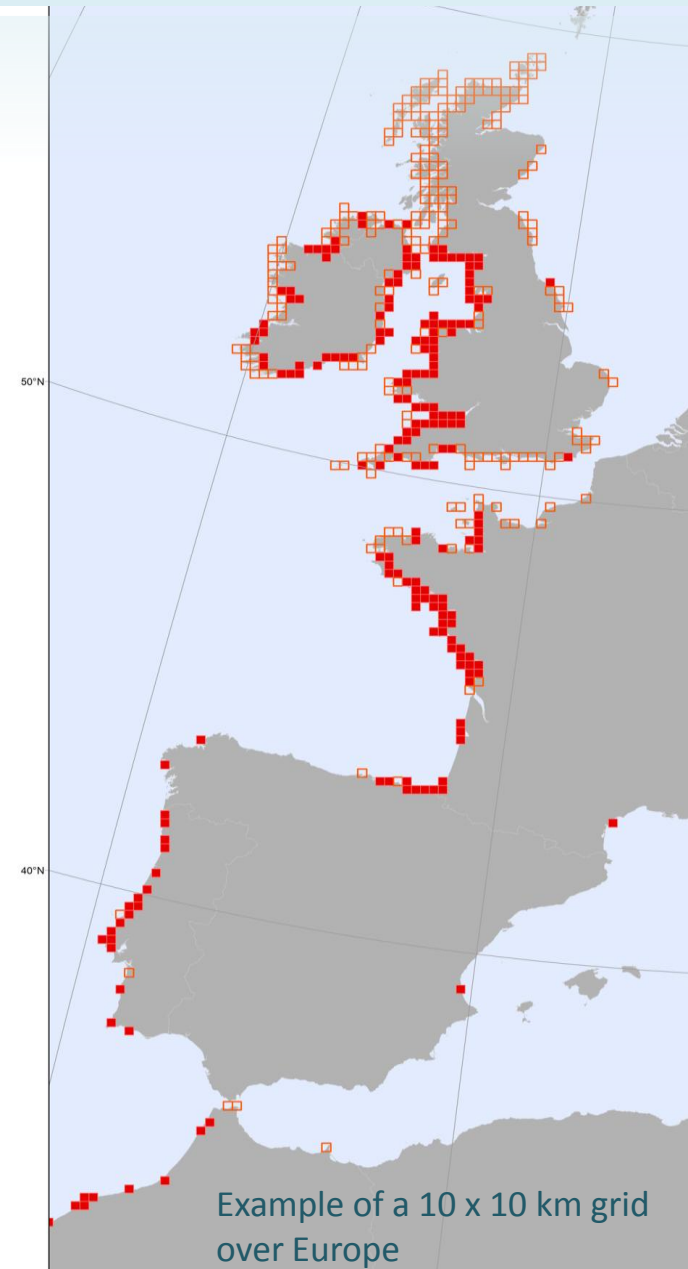
A lot of data mining and database construction from Amelia Curd and Celine Cordier (over 16 000 points in Europe)



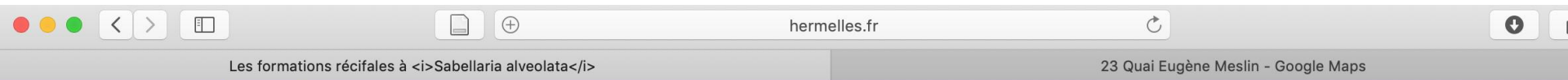
Fischer-Piette's notebooks



Une pêcherie photographée vers 1900. A la base du *goulet*, à côté de la table de tri, on remarque le *bachot* d'osier tressé, de forme ovoïde, avec la porte ouverte.



www.honeycombworms.org
www.hermelles.fr



Les formations récifales à *Sabellaria alveolata*

DÉCOUVRIR LES HERMELLES LE PROJET REEHAB PARTENAIRES MÉDIAS SIGNALEZ LA PRÉSENCE D'HERMELLES

Dernières actualités



REEHAB au 12e
Symposium
International sur les
Récifs Tempérés

📅 Publié le 28 janvier



[Autres](#)[Formulaire](#)

Je signale la présence d'hermelles

Vous avez observé la présence d'hermelles: relevez les informations nécessaires à leur localisation, si possible prenez une photo et signalez le nous en remplissant ce formulaire.

Date de l'observation

Date *

27/03/2019



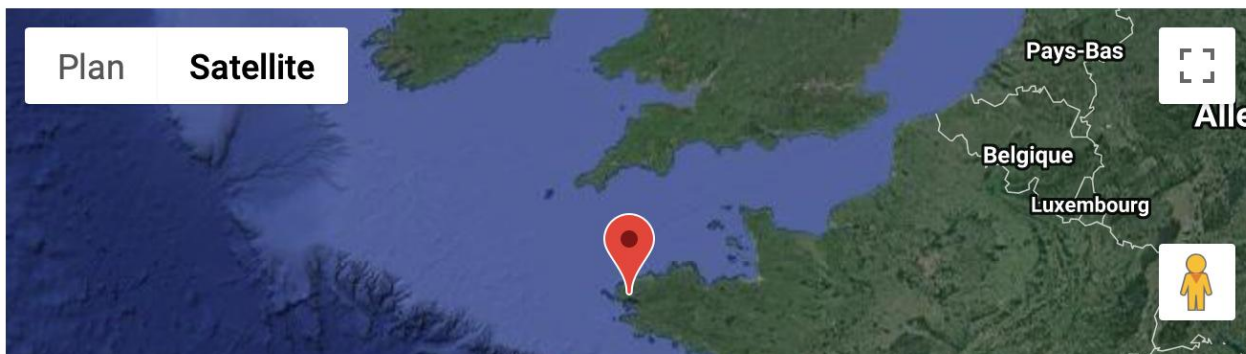
Lieu de l'observation

Position géographique *

Saisissez une coordonnée géographique, glissez/déposez le marqueur sur la carte, ou cliquez sur le bouton cible pour utiliser votre position actuelle avec votre consentement.

Plan

Satellite



Partager



Dernières actualités



[REEHAB au 12e Symposium International sur les Récifs Tempérés](#)

Publié le 28 janvier

Dernière modification le 30/11/2016