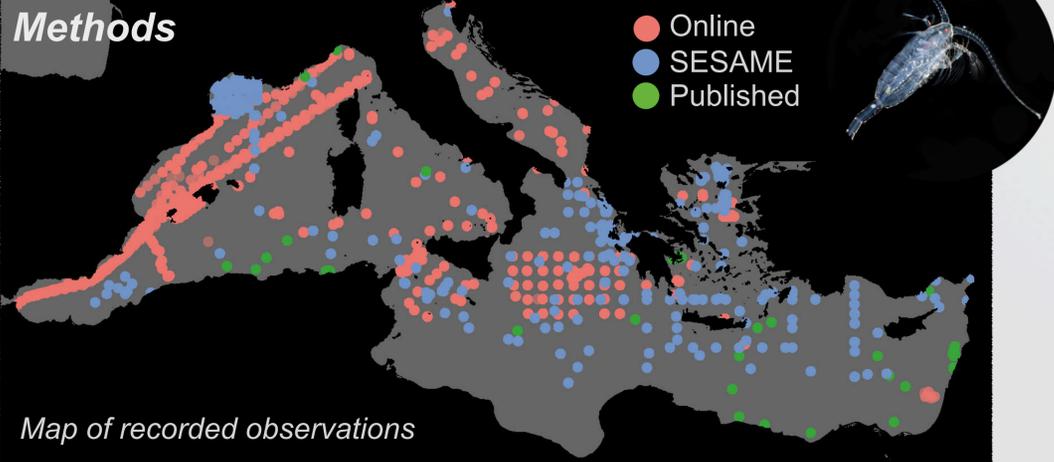


Introduction

Copepods are the principal component of mesozooplanktonic compartment. As part of subtask 1.1.6 of FP7 PERSEUS and of WP5 of MerMex, we aim to assess the **distribution of copepod diversity and communities**.

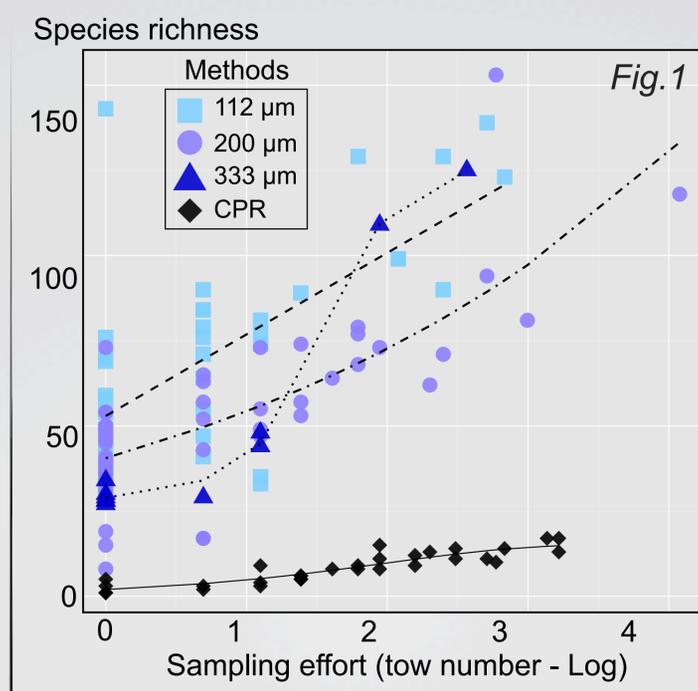
A **new large dataset** of punctual occurrences was built to study the spatial distribution of specific richness and its link with sampling effort, but also to detect the main geographical species assemblages. Finally, an environmental niche model allowed us to project the presence probabilities of 168 copepod species under the Mediterranean Sea's environmental conditions, which also allowed us to model copepod diversity over the whole basin.

Methods



Sources	Genera	Species	Observations	Surface
16	117	369	116 527	77% (1° cells)
Presence only		No temporal variation		
Diversity & Sampling	Communities	Modelled diversity		
<ul style="list-style-type: none"> Classes of methods Fitted 8 species-area models Keep the best-fitting 	<ul style="list-style-type: none"> K-means clustering on 1° cells Sørensen similarity index Indicator Value for characterization 	<ul style="list-style-type: none"> Environmental Niche Model Presence probability as a function of SST, SSS, Chla & Bathym. Sum in 0.2° cells 		

Results & Discussion



Increase of species richness with sampling effort according to the 4 sampling methods

Diversity increases differently depending on sampling method

CPR < 200 µm (WP2 net) < 112 µm
 333 µm : not enough data yet

Thinnest mesh size is better for sampling diversity
CPR suited for macroecological scale

Need more data to infer diversity from one tool to another

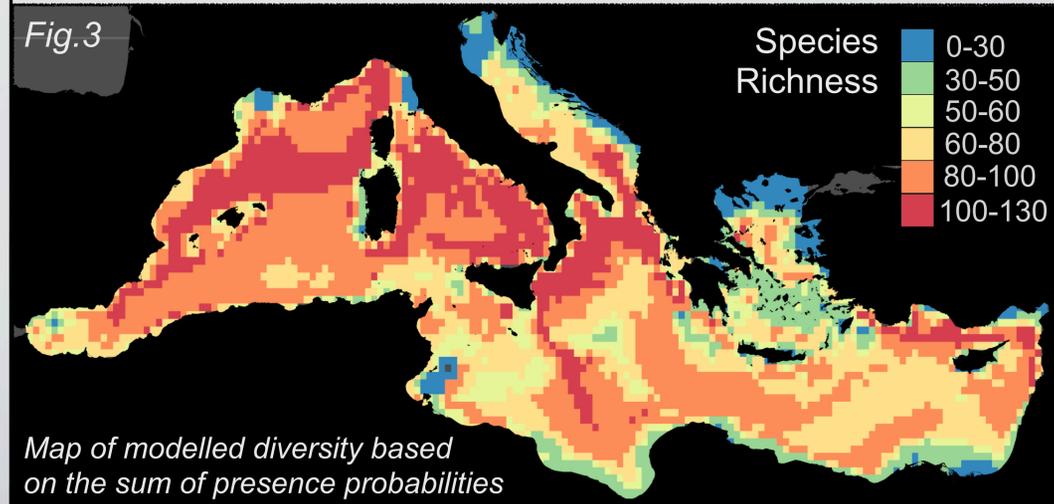
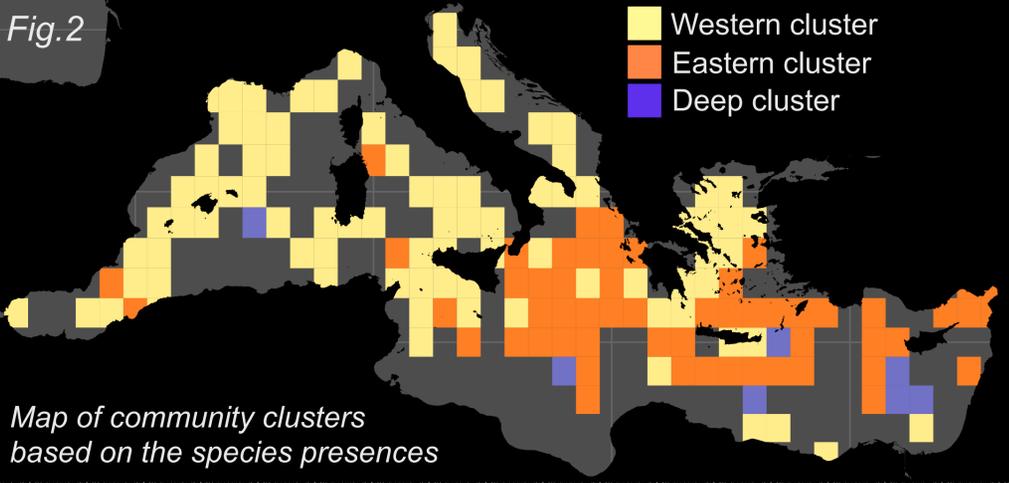
Specific communities

West-East division of communities

West : Cosmopolitan species
 Require variable conditions (T°, Chla...)

East : More endemic species
 Adapted to oligotrophic conditions

Blue : Deep sea species



Modelled species richness

168 modelled species

West more diverse than East
 Link with more variable conditions ?

Or :

Chosen variables + higher sampling in the West ?