Corsican seagrass detritus: An opportune shelter or a Copepod Eldorado ??

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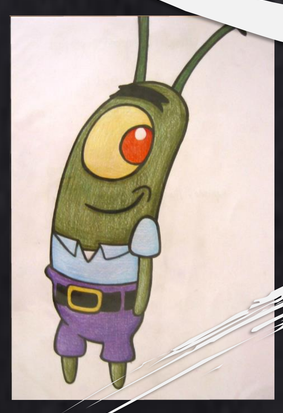
Foreword

- *Posidonia oceanica* seagrass form vast meadows in the Mediterranean Sea
- During autumnal senescence the leaves are shed and the dead leaves accumulate on unvegetated sand patches with other debris
- Those "macrophytodetritus" accumulations host a wide biodiversity (fauna & flora), especially Copepoda that serve as primary food source for macrofauna and juvenile fishes



What we discovered !

- More than 50% of the meiofauna are copepods and 80% are benthic
- They ☺ habitat complexity
- The copepod abundances don't follow the annual senescence cycle, but they follow the primary production cycle from inside the macrophytodetritus
- They ☹ (e.g. epiphytic algae) wind induced hydrodynamics
- They stay for several generations in the macrophytodetritus, leaving their habitat (deduced by their morphology) ...

Take home message:

Macrophytodetritus is a copepod species-specific opportune Eldorado for sheltering, nursing and feeding !!

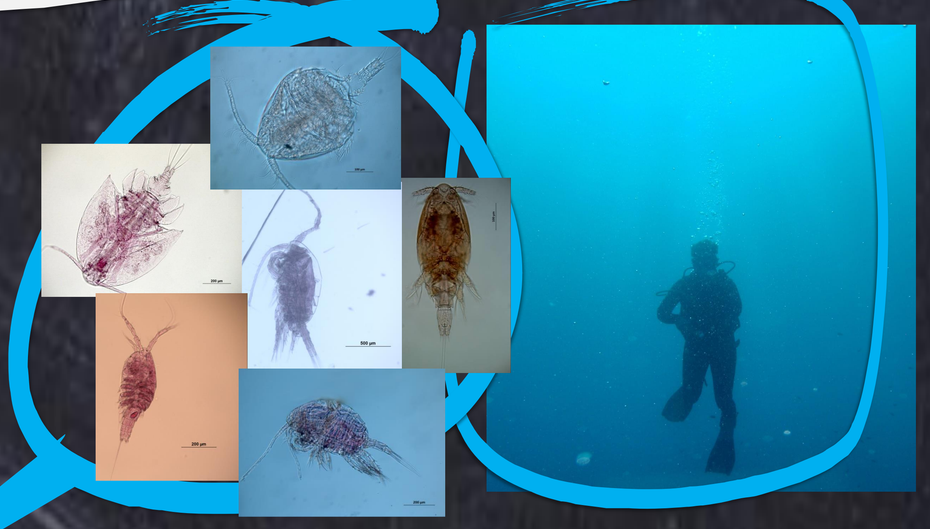
Who lives in there ?

- Seagrass meadow ecosystems host a very diverse community of morphologically adapted and ecologically specialized copepods:
  - Planktonic in the water column = Droplet shaped + long antennule
  - Benthic Epiphytal on seagrass leaves = Flattened + Grasping legs
  - Benthic Mesopsammic in the sediment = Vermiform + Very short antennule

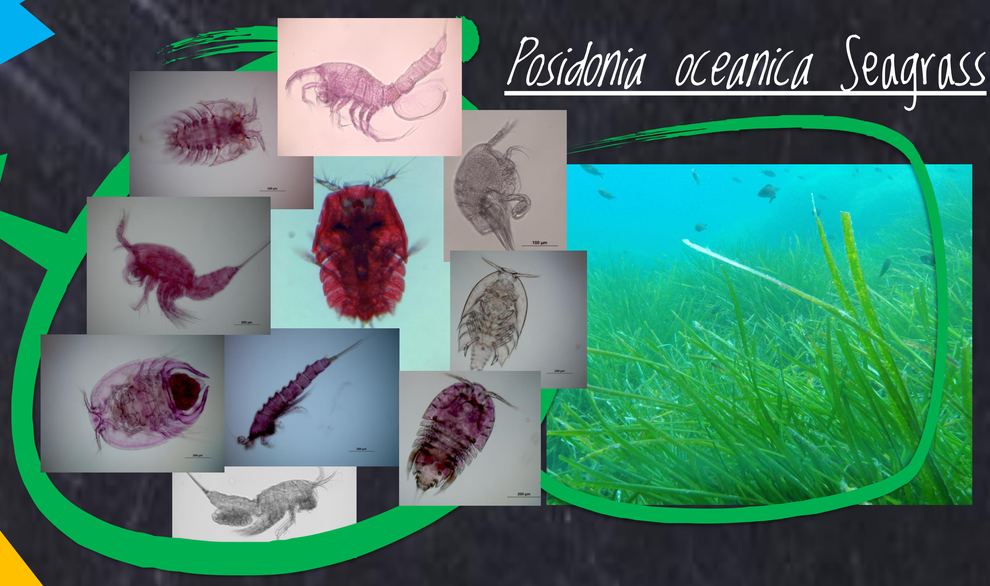
They are all present in the Macrophytodetritus !?

Macrophytodetritus

Water column



Posidonia oceanica Seagrass



Bare sediments

The 14th VLIZ Young Marine Scientists' Day
March 7th 2014, Brugge, Belgium

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