

The secret life of a Mediterranean seagrass litter macrofauna community : a history of oxygen

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What is « litter » ?

Posidonia oceanica

seagrass



Dead leaves,
Living leaves,
Macroalgae,
Micro...

Macrofauna

« Dead leaves litter »



**50-90 %
exported**

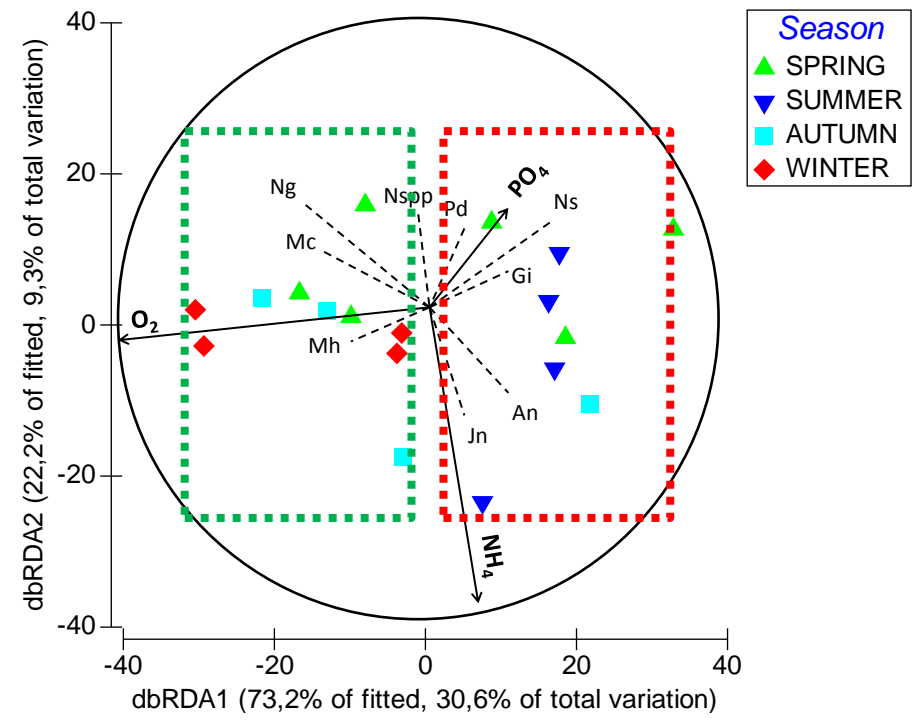
		O ₂ (mg.L ⁻¹)	
		PC	p
	<i>Gammarella fucicola</i> ✘	-	-
	<i>Gammarus aequicauda</i> ✘	-	-
Amphipod	<i>Melita hergensis</i> ✔	0,7768	0,0082
	<i>Dexamine spinosa</i> ✔	0,6162	0,0098
	<i>Nototropis guttatus</i> ✔	0,6695	0,0034
	<i>Microdeutopus chelifer</i> ✔	0,5886	0,0085
Leptostracean	<i>Nebalia strausi</i> ✔	-0,9133	0,0002
Decapod	<i>Galathea intermedia</i> ✔	-0,7988	0,0056
	<i>Athanas nitescens</i> ✔	-0,7353	0,0054

Some ✘, some ✔ (+/-)

→ Species specific

Oxygen role on fauna?

dbRDA graphical representation



Oxygen → ~30% of variability

Oxygen seems to be one of the major factors

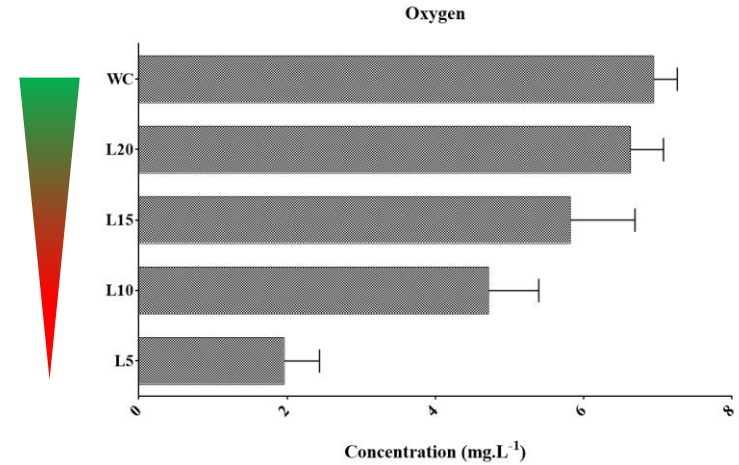
Experimental design.



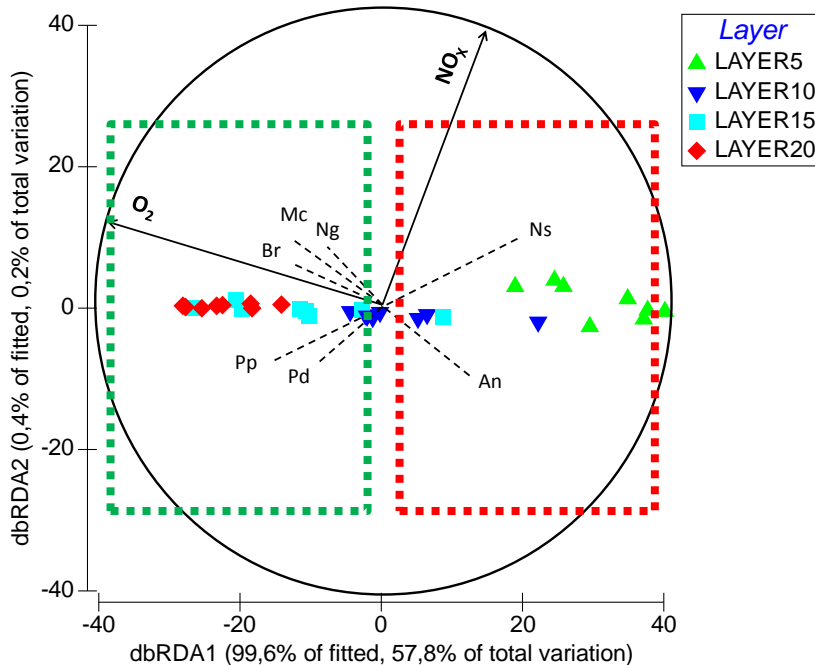


Experiment.

48h



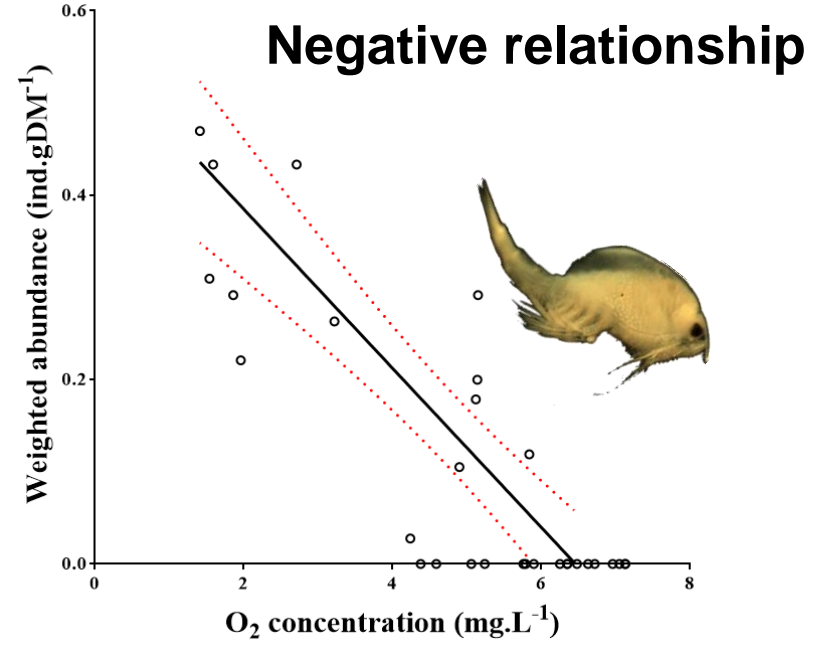
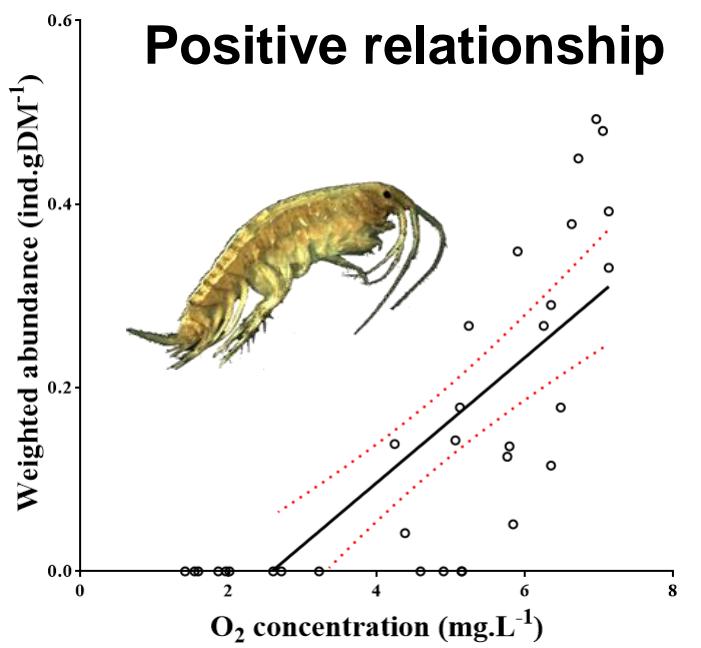
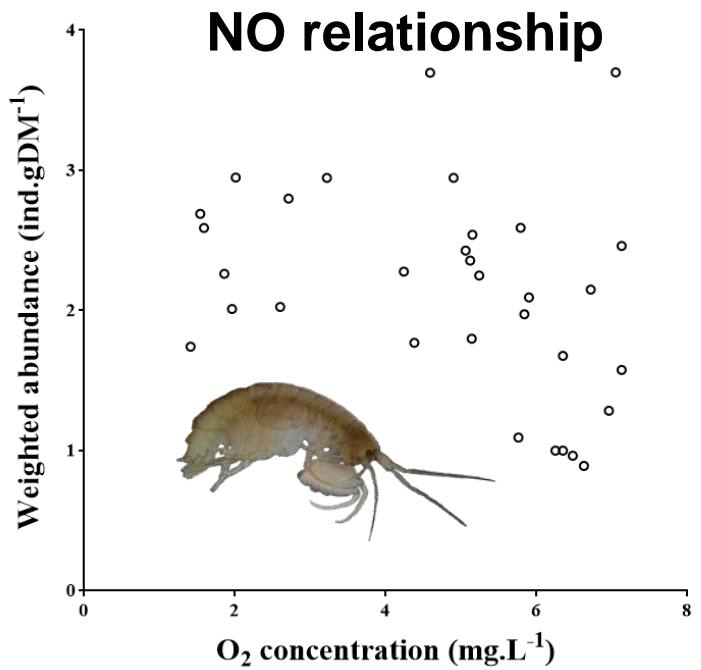
dbRDA graphical representation



- Stratification in 48h → μ habitats
- Hypoxia threshold quickly reached
- + or - (or no) relationship
- Diversity < in L5 but species \neq
- Oxygen → > 55% of variability

3 ≠ patterns.

The main concept :
« **species specific** »



Take home message.

- **Litter is a dynamic home and feeding place for 115 species**
 - **O_2 = major driver of (some) litter invertebrates**
 - **Impact of O_2 : species specific**

THANK YOU FOR YOUR ATTENTION

