

Bryozoa zooid size along thermal gradient of North Atlantic

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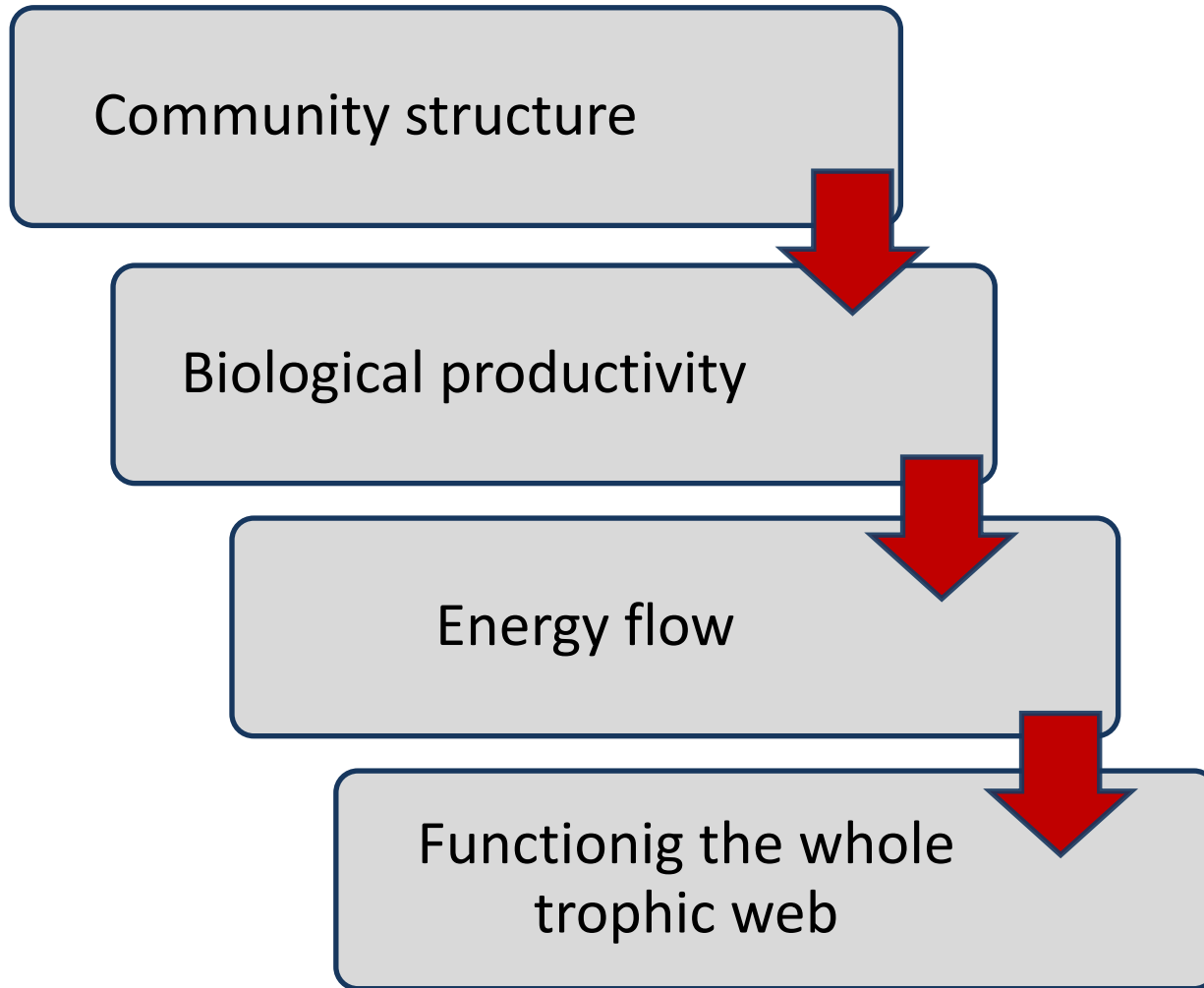
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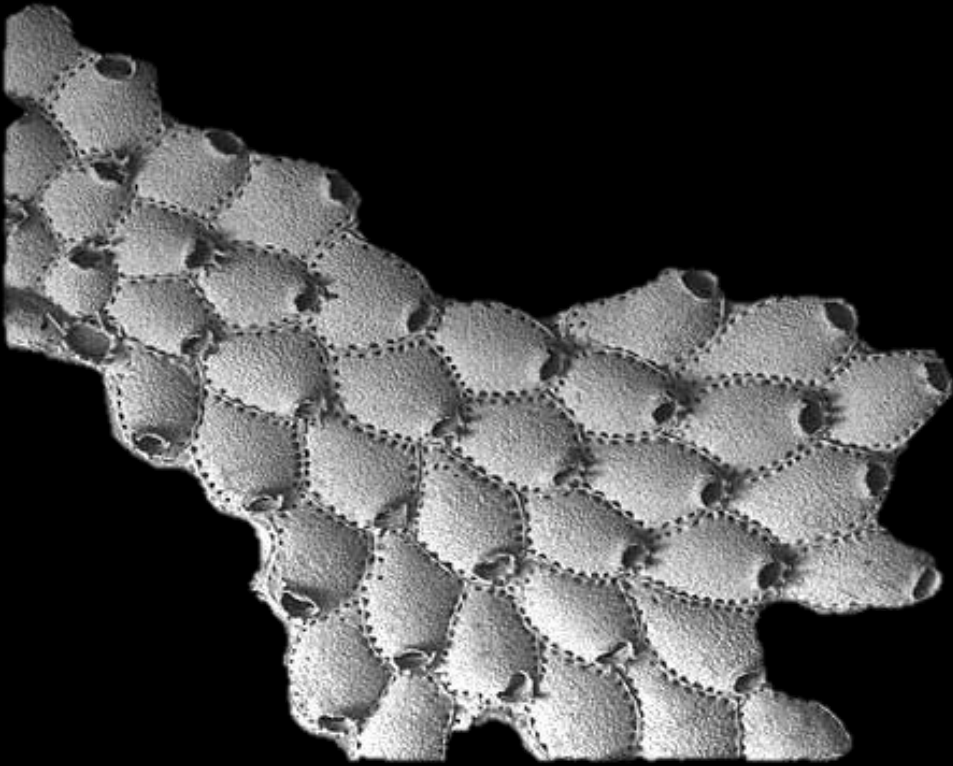
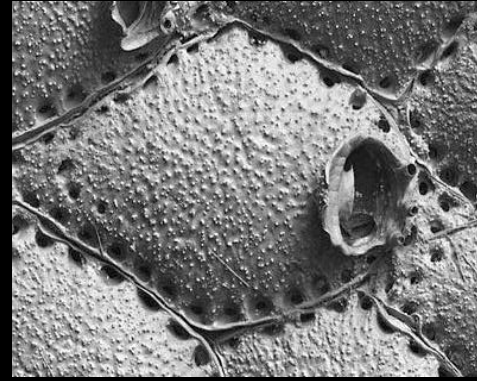
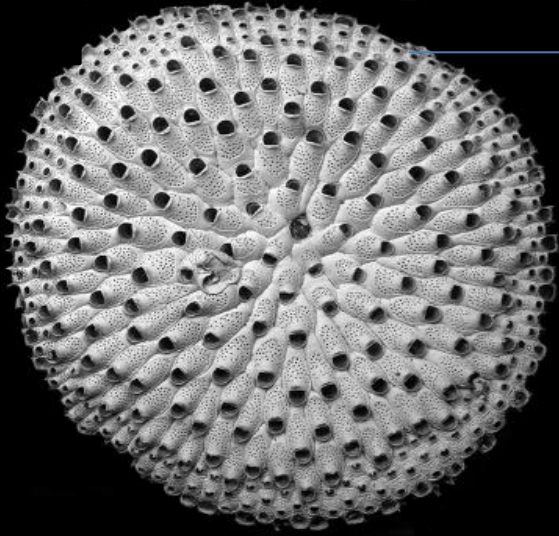


Impact of body size reduction

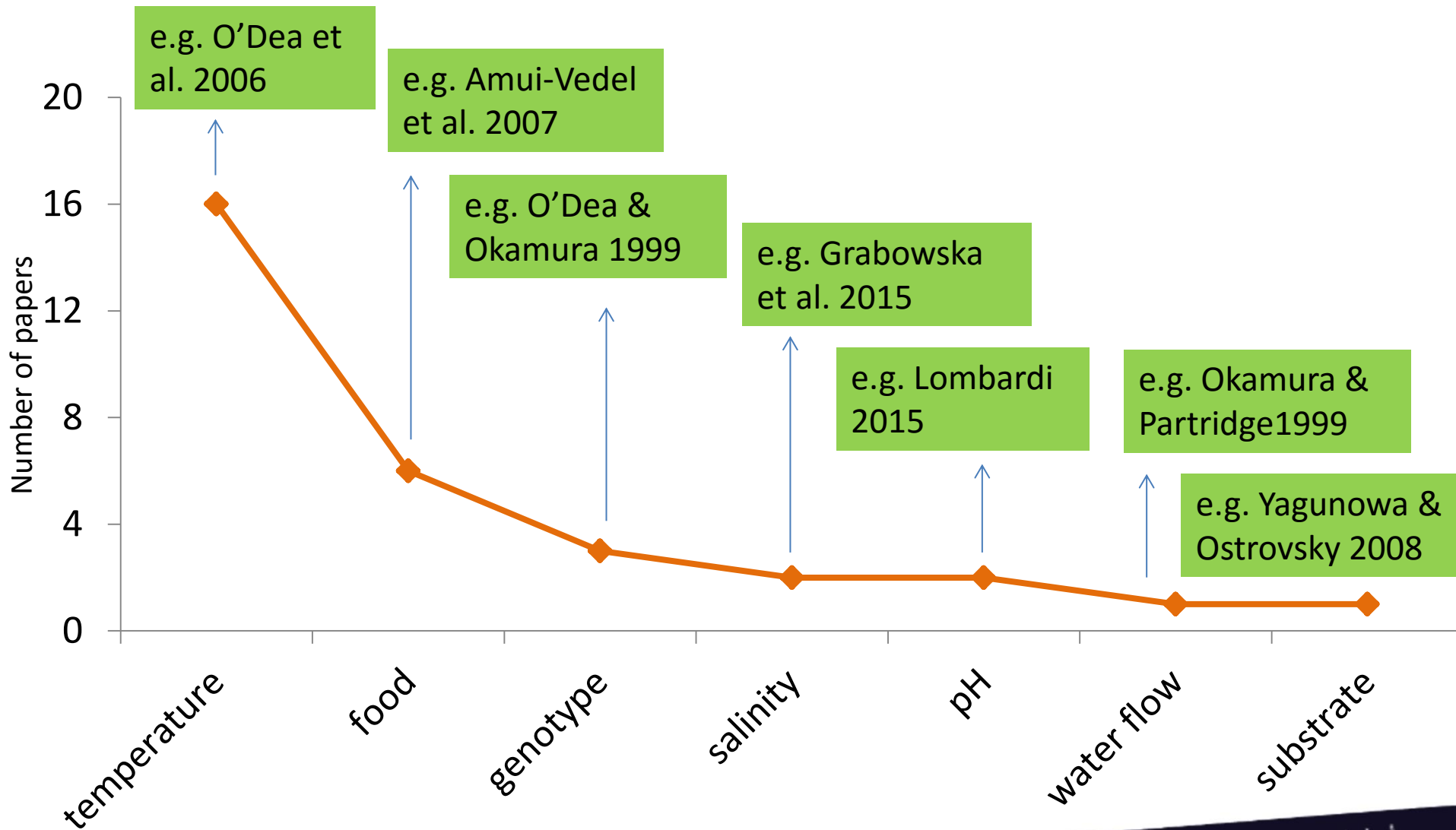




Bryozoa



What we know so far?



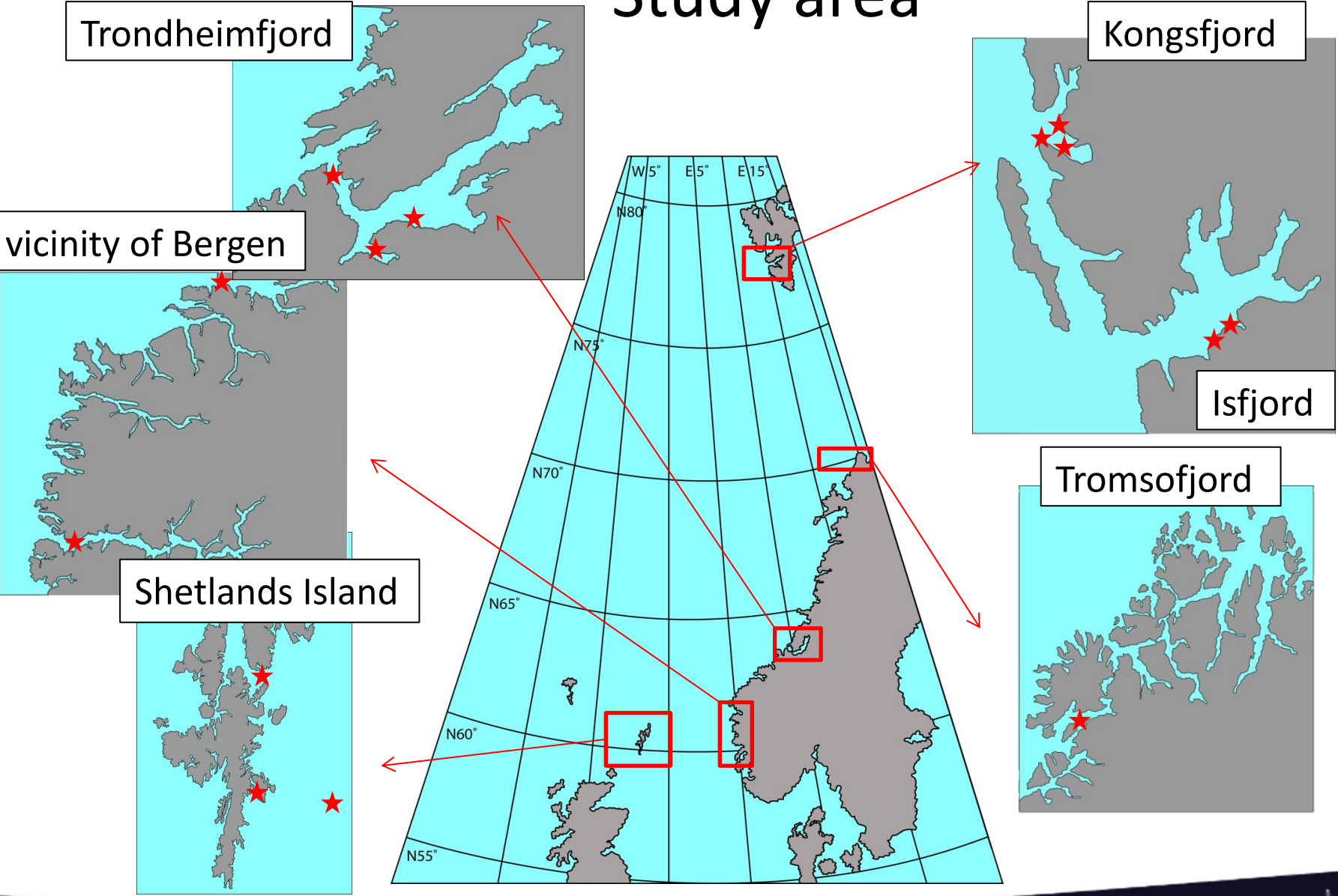
Aim of the study

Assessment of the trends in bryozoan
zoid size in the North Atlantic

1. Size changes among populations
2. Size changes among Bryozoan assemblages



Study area

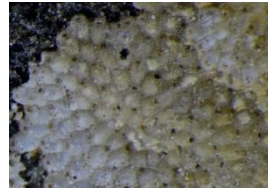




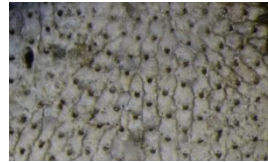
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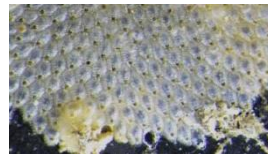
Material and methods



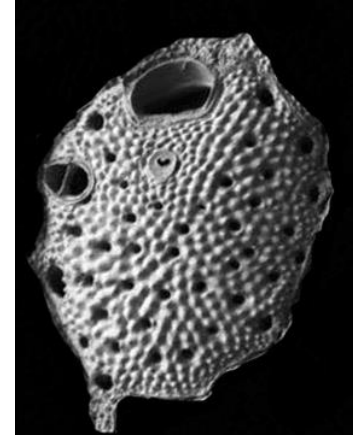
Microporella ciliata



Microporella arctica



Escharella immersa

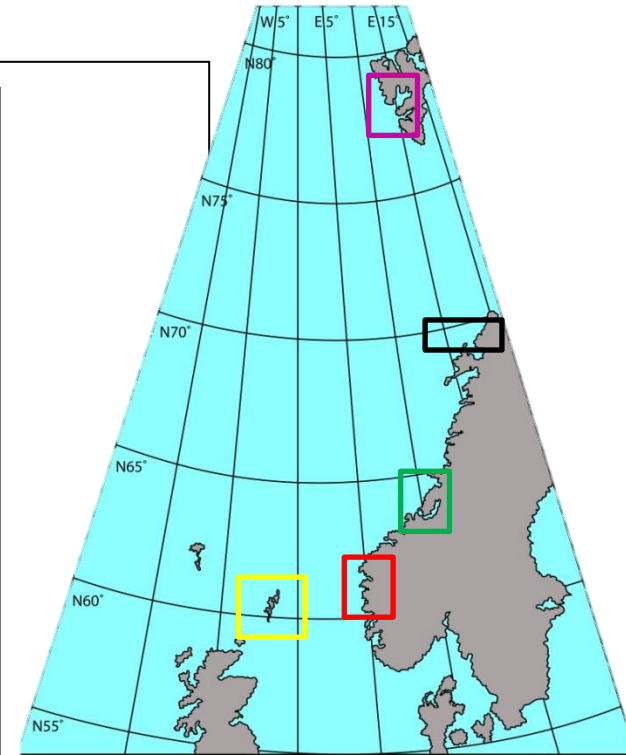
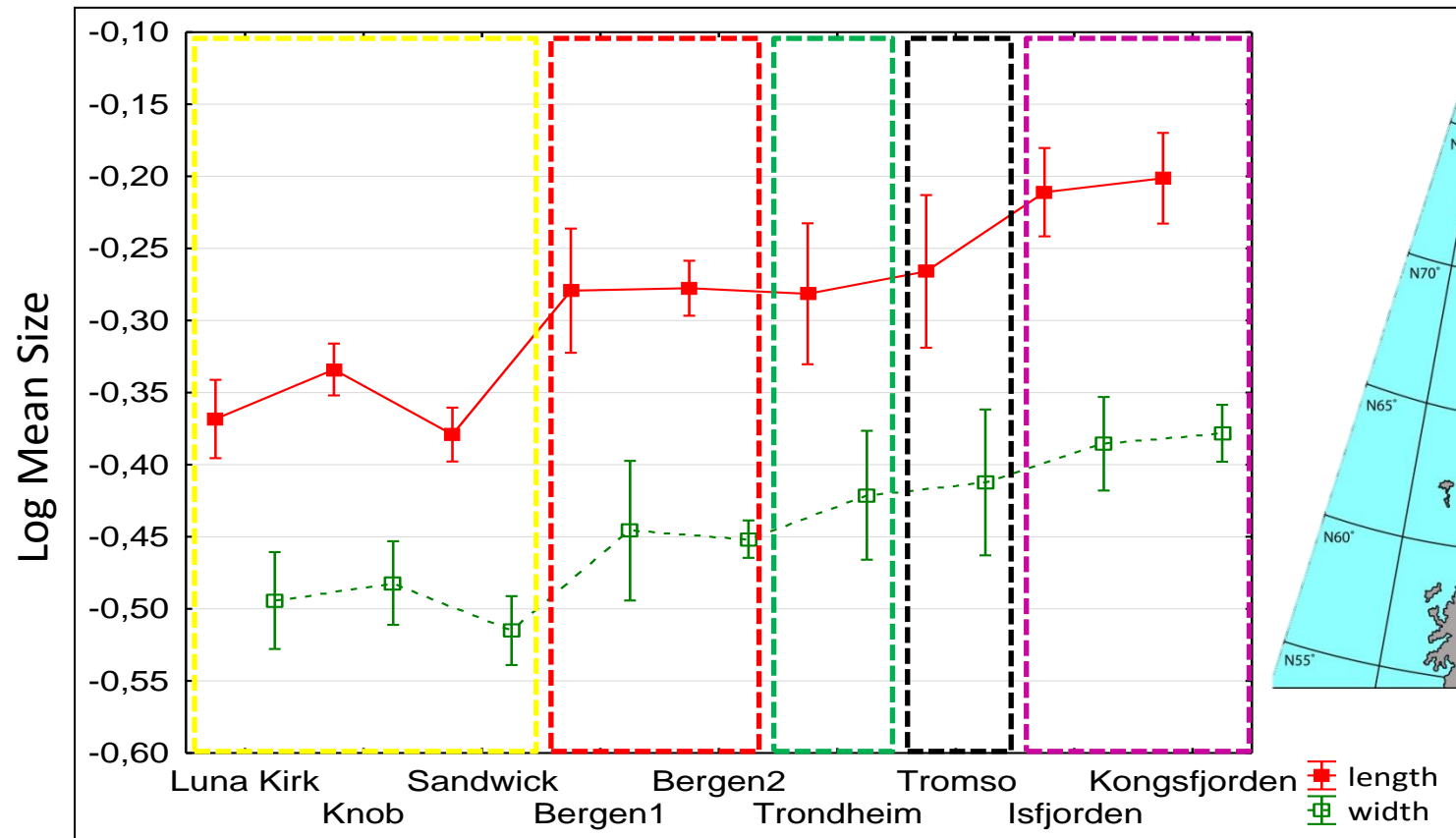


- Three species choosed for the study →
- Colonies photographed →
- 20 zooids randomly choosed for measurement →
- Maximum lenght and width measure →
- Statystical analysis



Results

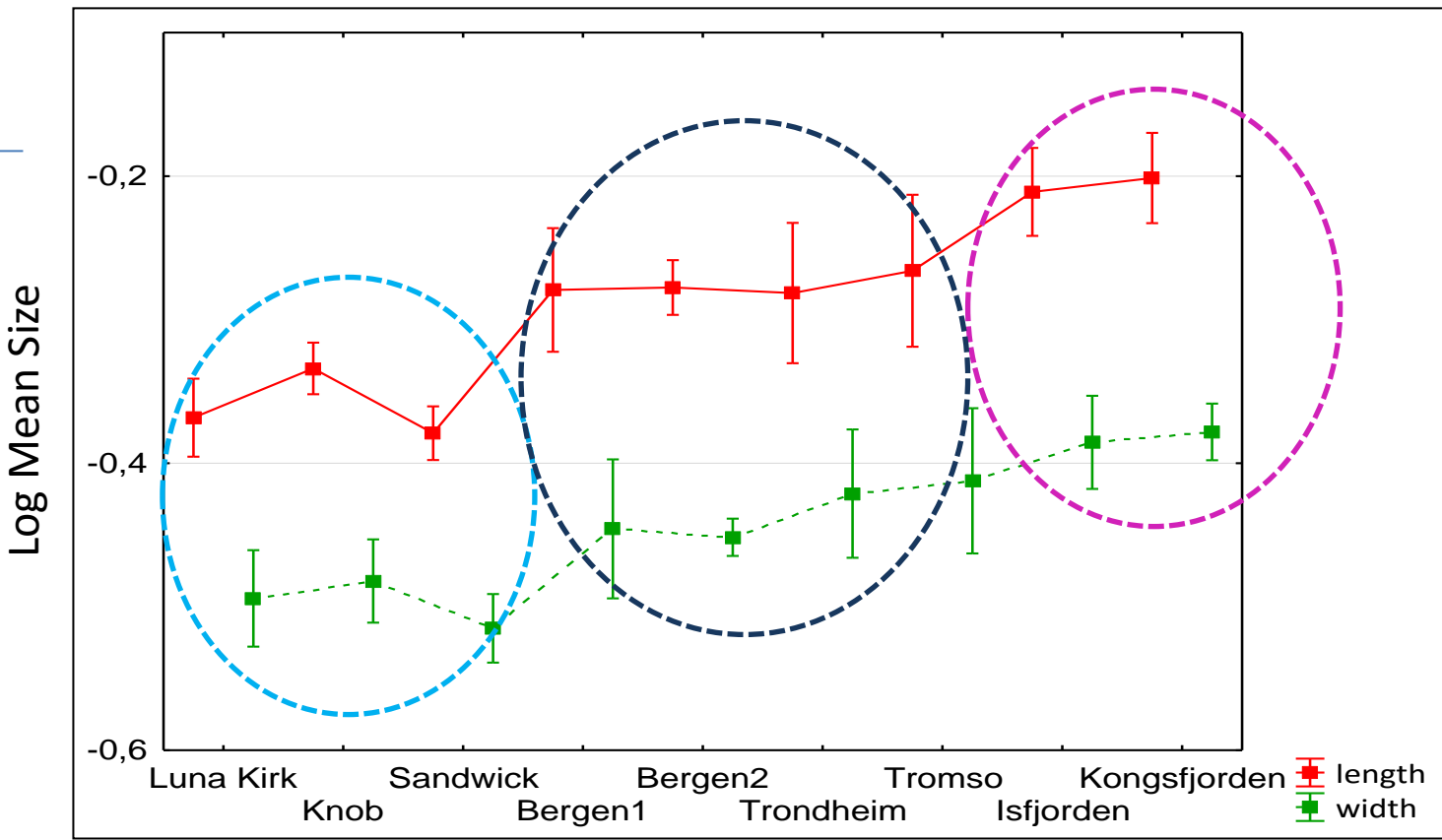
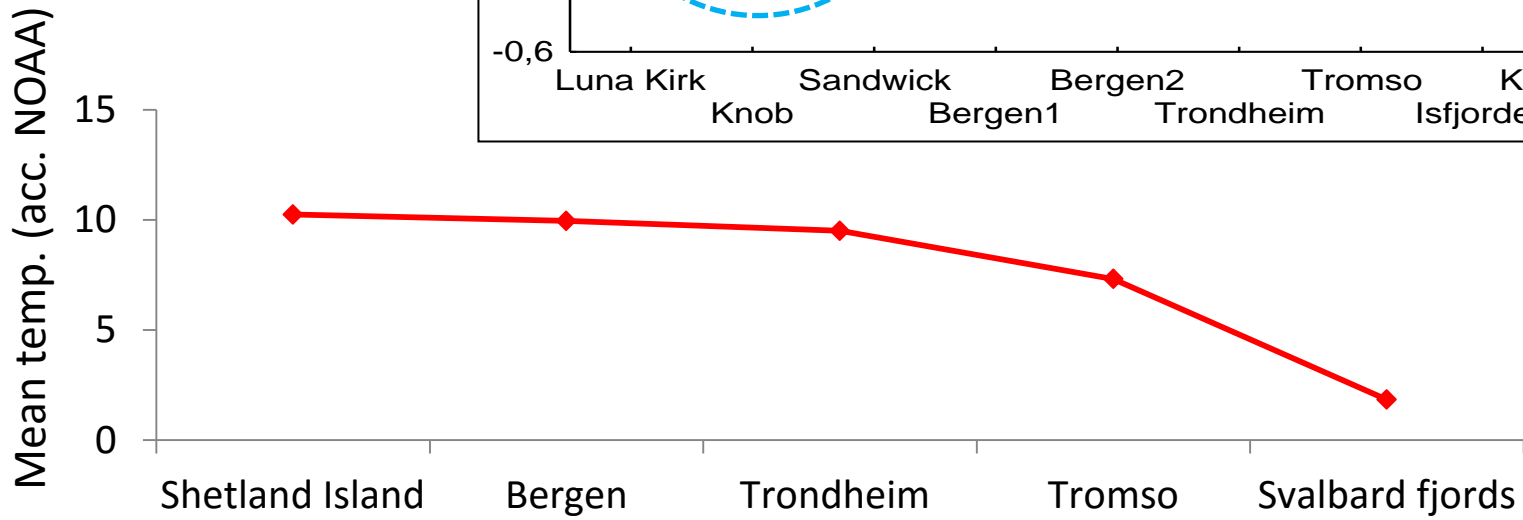
MEAN \pm SD (BRYOZOAN ASSEMBLAGES)



Statistically significant differences between assemblages collected in vicinity of Shetland Island, along coast of Norway and near Svalbard.

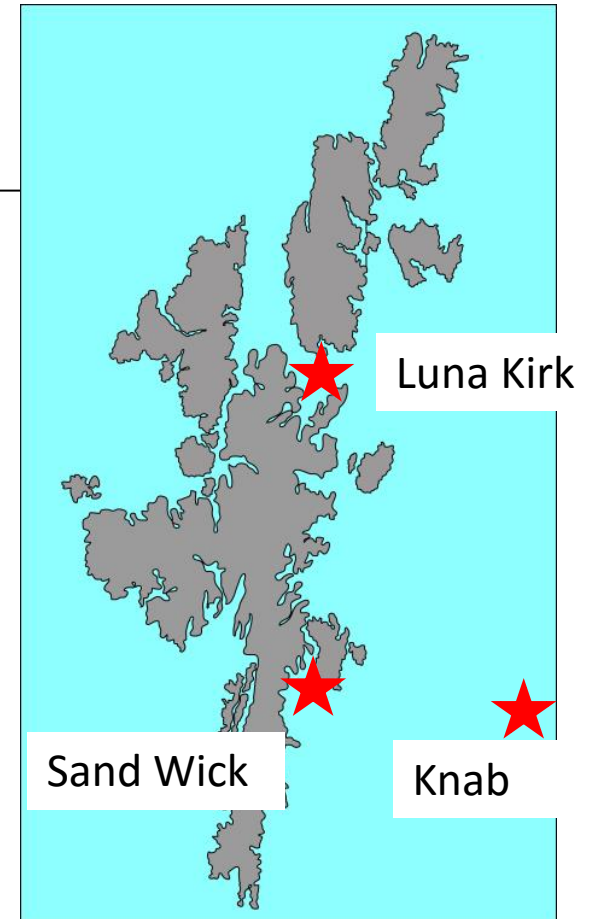
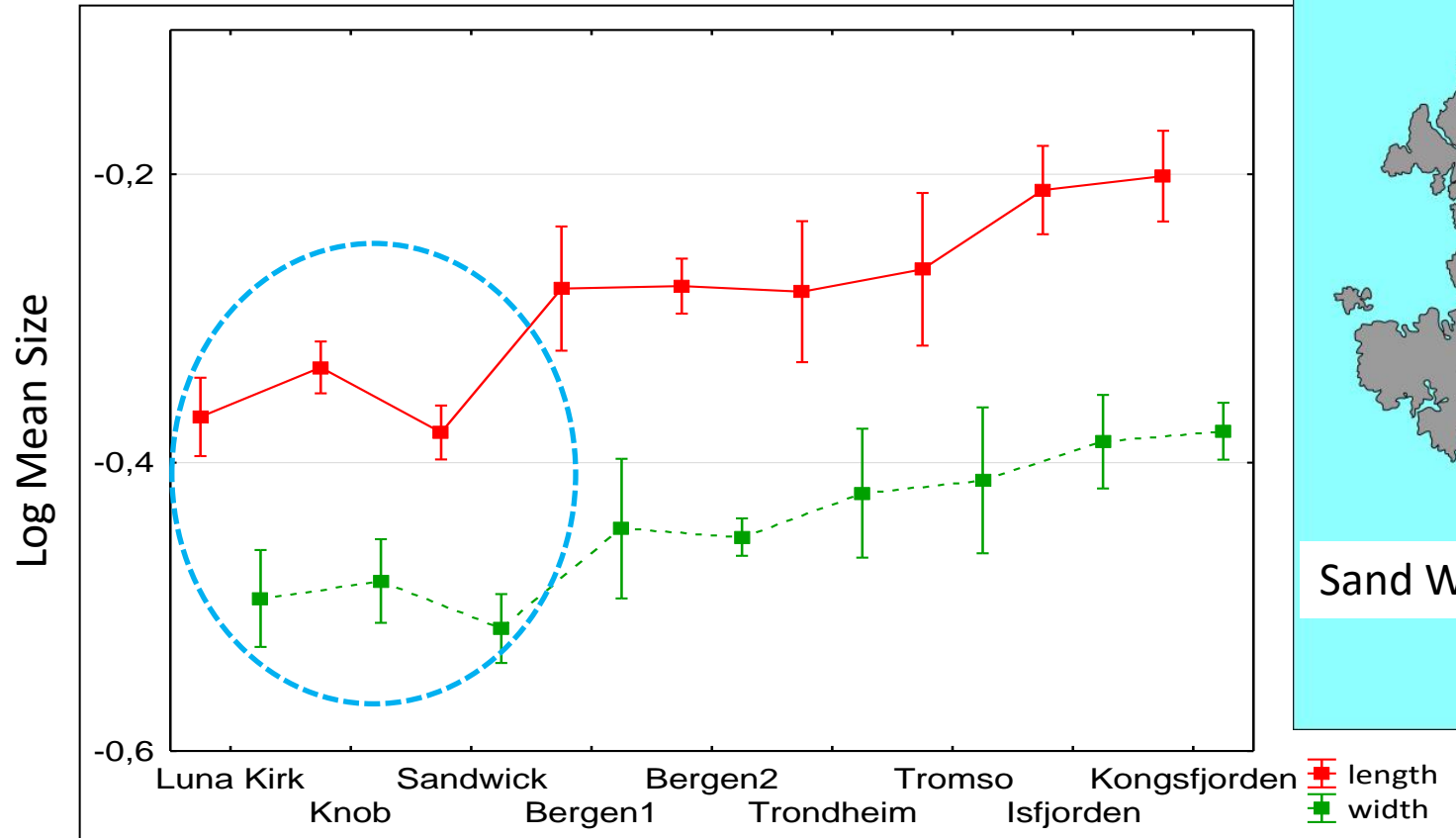


Results



Results

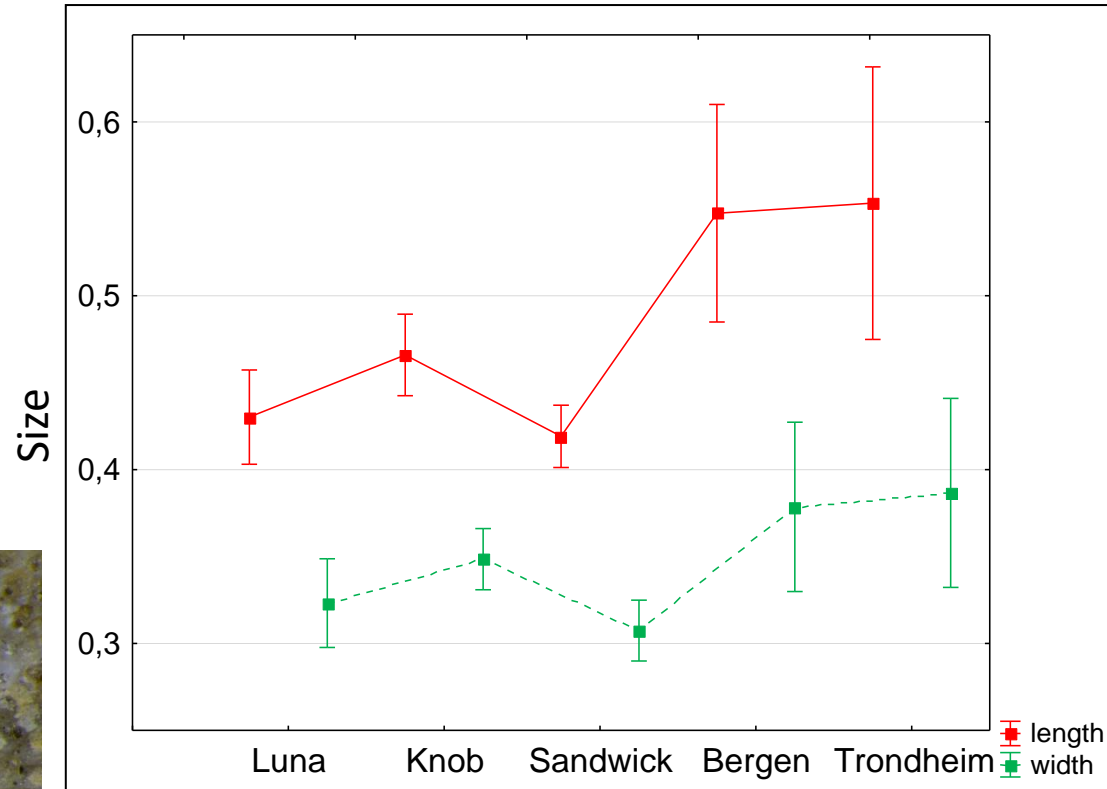
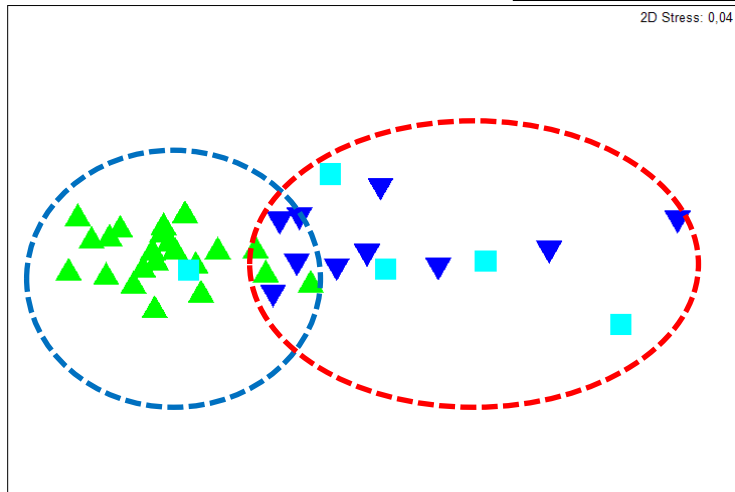
MEAN \pm SD (BRYOZOAN ASSEMBLAGES)



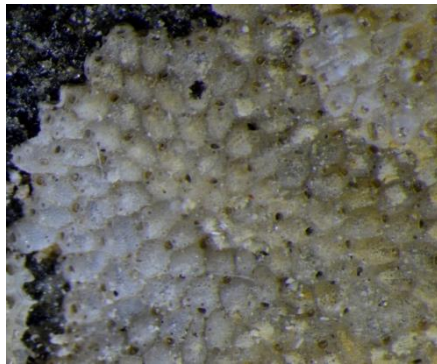
Results

MDS

MEAN \pm SD



- ▲ Shetland Island
- ▼ Bergen
- Trondheim



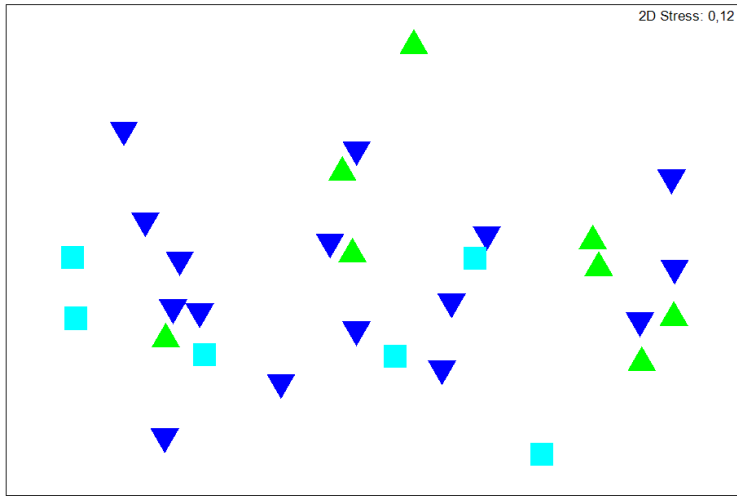
$P < 0.02$

MICROPORELLA CILIATA SENSU HAYWARD & RYLAND 1998

Results

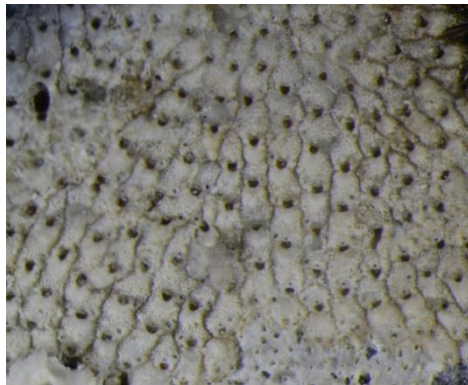
MDS

MEAN \pm SD

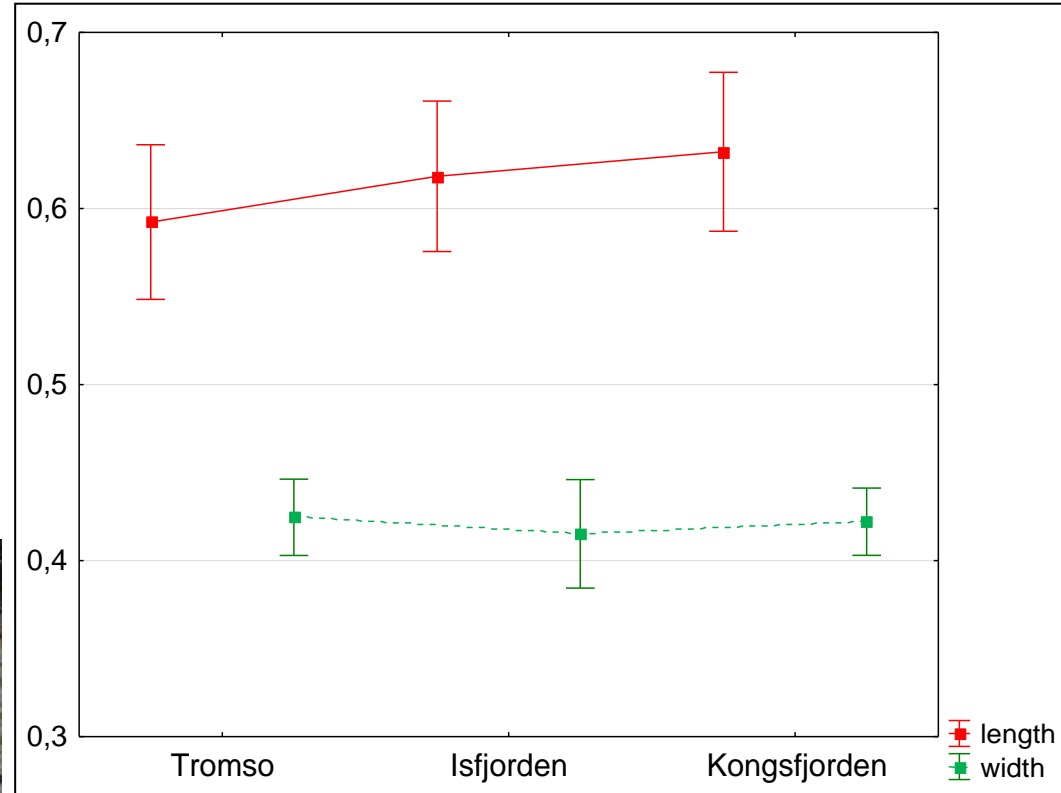


- ▲ Tromsø
- ▼ Isfjorden
- Kongsfjorden

$P > 0.05$



Size

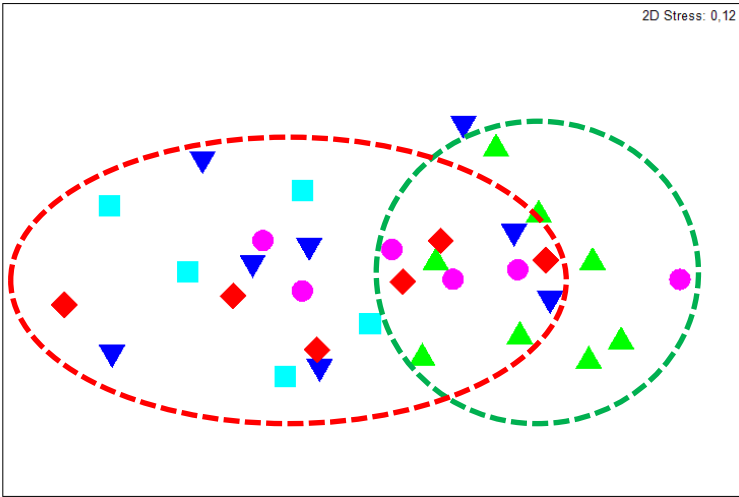


MICROPORELLA ARCTICA

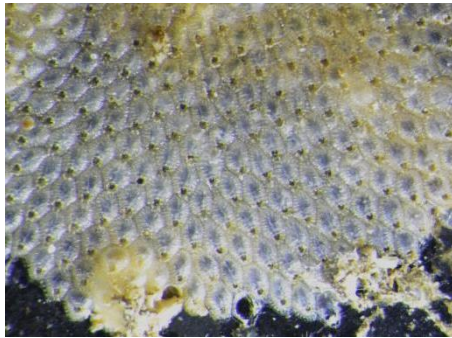
Results

MDS

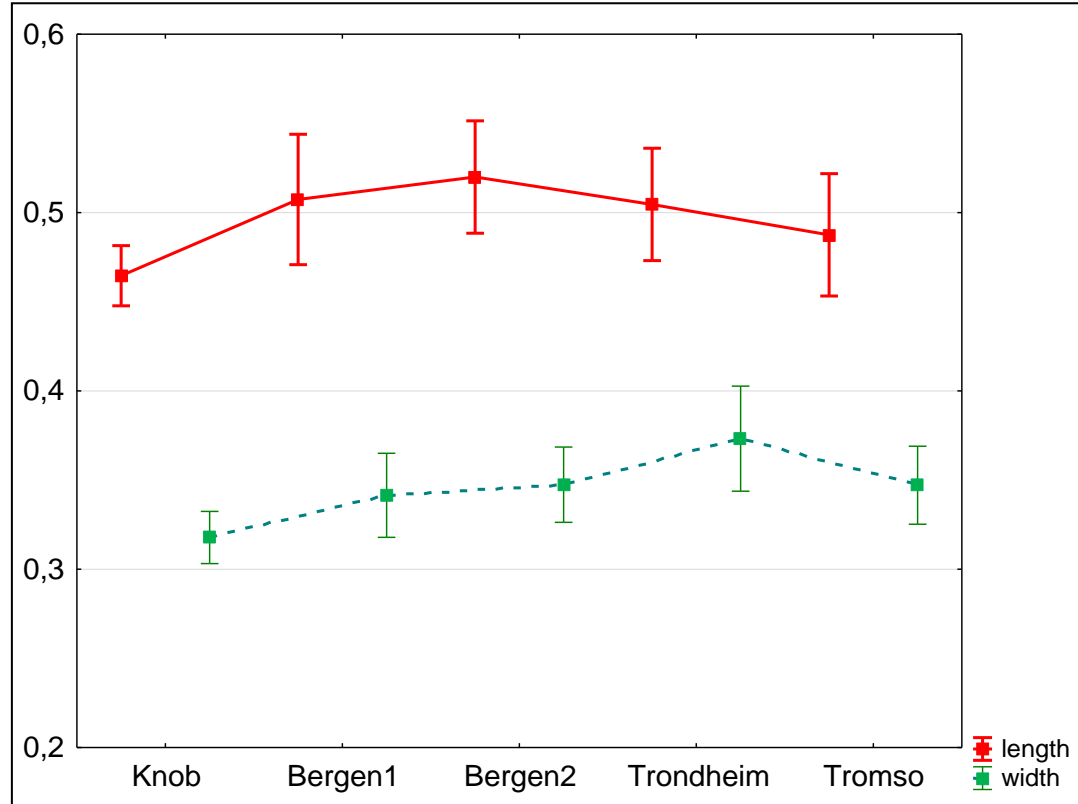
MEAN \pm SD



- ▲ Knab
- ▼ Bergen 1
- Bergen 2
- ◆ Trondheim
- Tromso



P=0.01



ESCHARELLA IMMERSA

Conclusion

- Zooid size in Bryozoan assemblages tends to increase toward higher latitudes
- Changes of size is species-specific
- Increasing trend with latitudes within colonies of *M. ciliata*
- *M. antarctica* slightly increase length of its zooids, but not significant
- *E. immersa* presents a high variability of zooid size





DWARF

Declining size - a general response to climate warming in Arctic fauna?

