

SOFT BOTTOM SUBTIDAL MACROFAUNA: YOLDIABUKTA & GIPSVIKA



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STUDY AREA

YOLDIABUKTA



- active glacier
- sea ice (in winter)

„true Arctic ”

7 stations
depth:15-90m

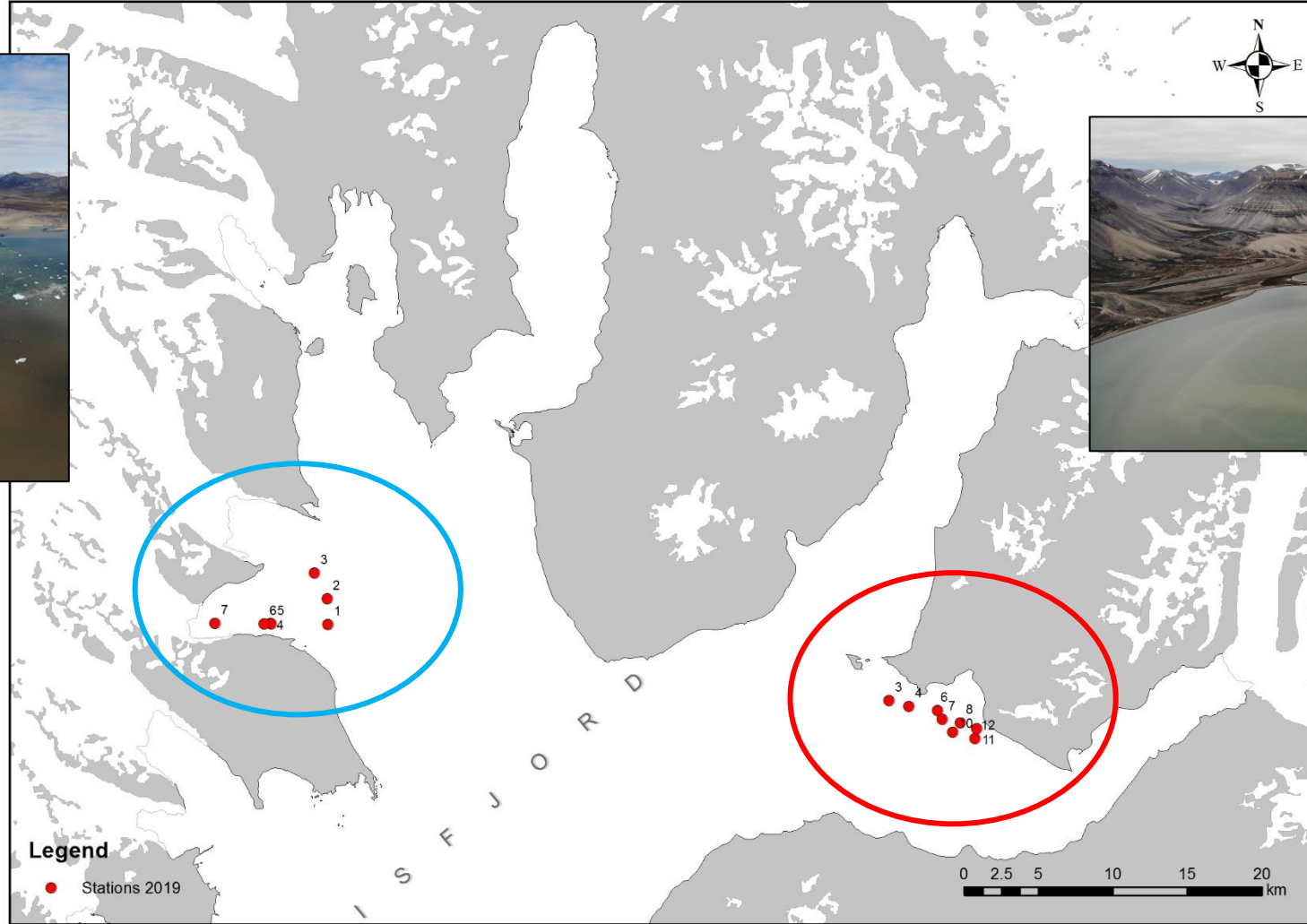
GIPSVIKA



- river- outlet
- no sea ice

„warming Arctic ”

8 stations
depth:15-70m



JULY 2019

SAMPLING

- van Veen grab – 0.1m² – 3 replicates per station
- box-corer – 3 replicates per station
- CTD – each station



DATA

Fauna

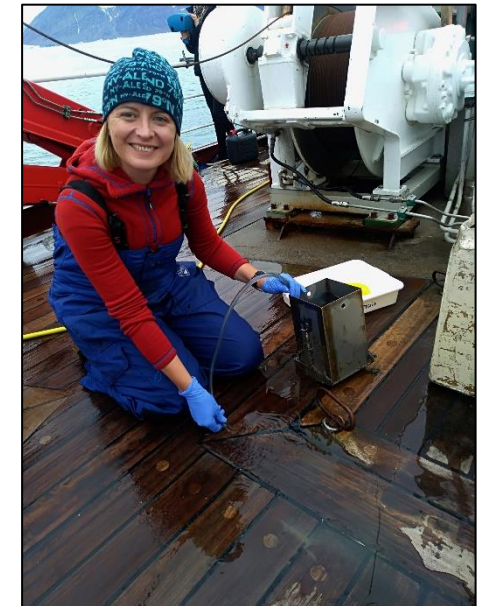
- macrofauna (abundance, biomass)

Sediment properties

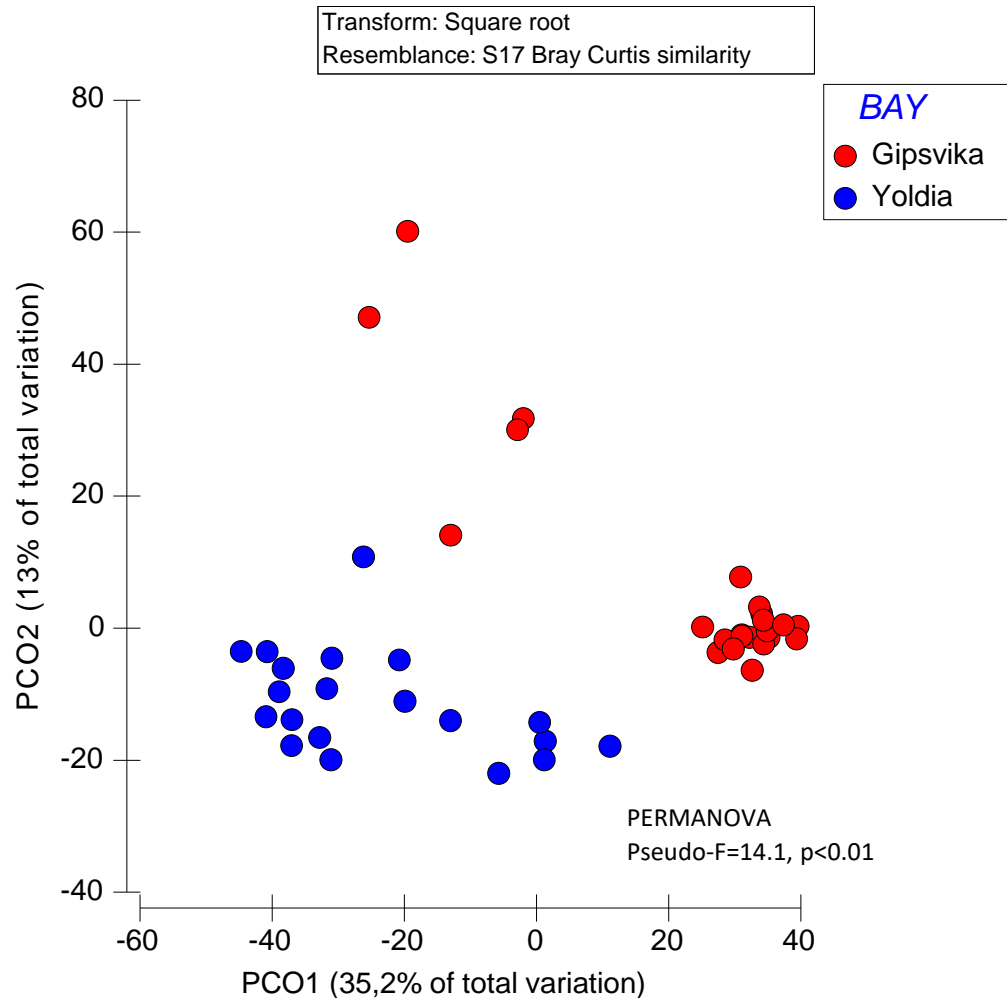
- grain size
- chlorophyll a, pheopigments
- C, N, $\delta^{13}\text{C}$ i $\delta^{15}\text{N}$

Hydrology

- bottom temperature and salinity



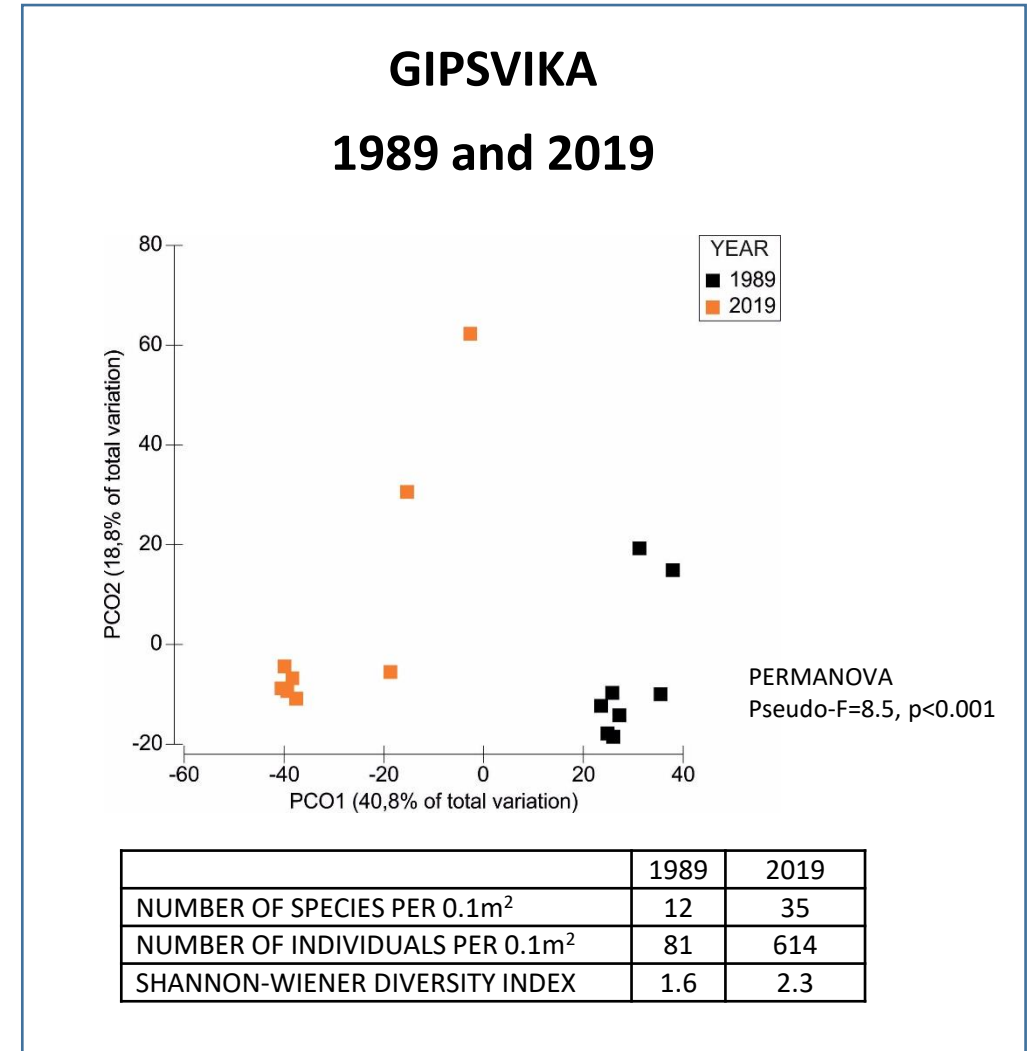
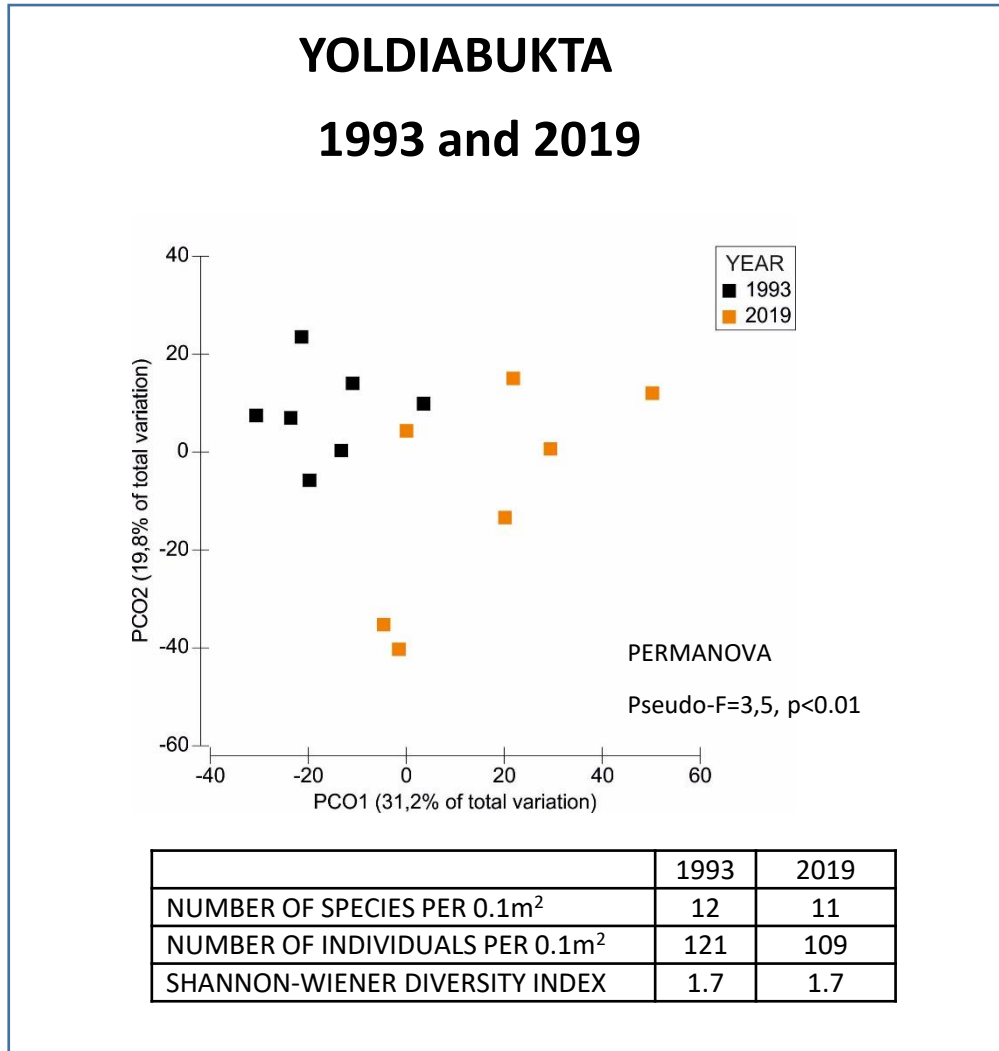
1. MACROFAUNA OF TWO BAYS – preliminary data without Polychaeta



	YOLDIABUKTA	GIPSVIKA
NUMBER OF PHYLA	6	12
NUMBER OF SPECIES	35	105
NUMBER OF SPECIES PER 0.1m ²	7.5	28
NUMBER OF INDIVIDUALS PER 0.1m ²	56	238
SHANNON-WIENER DIVERSITY INDEX	1.4	2.3

- fauna of galcial bay Yoldiabukta is poorer in species, less diverse and numerous than fauna of Gipsvika (permanent disturbance regime, low productivity, uniform fine-grain sediment, anoxia ...)

2. TWO BAYS REVISITED AFTER ~ 30 YEARS – preliminary data for molluscs and crustaceans



- the same set of dominant species, different proportions
- Yoldiabukta – lack of change in species richness, abundance and diversity of Mollusca and Crustacea
- Gipsvika – clear increase of species richness, abundance, biomass and diversity in both taxonomic groups



our preliminary data suggest a stronger temporal change in the 'warm' / river-outlet system, compared to the 'cold' / glacial bay, BUT let's wait for polychaetes - the dominant players!

