



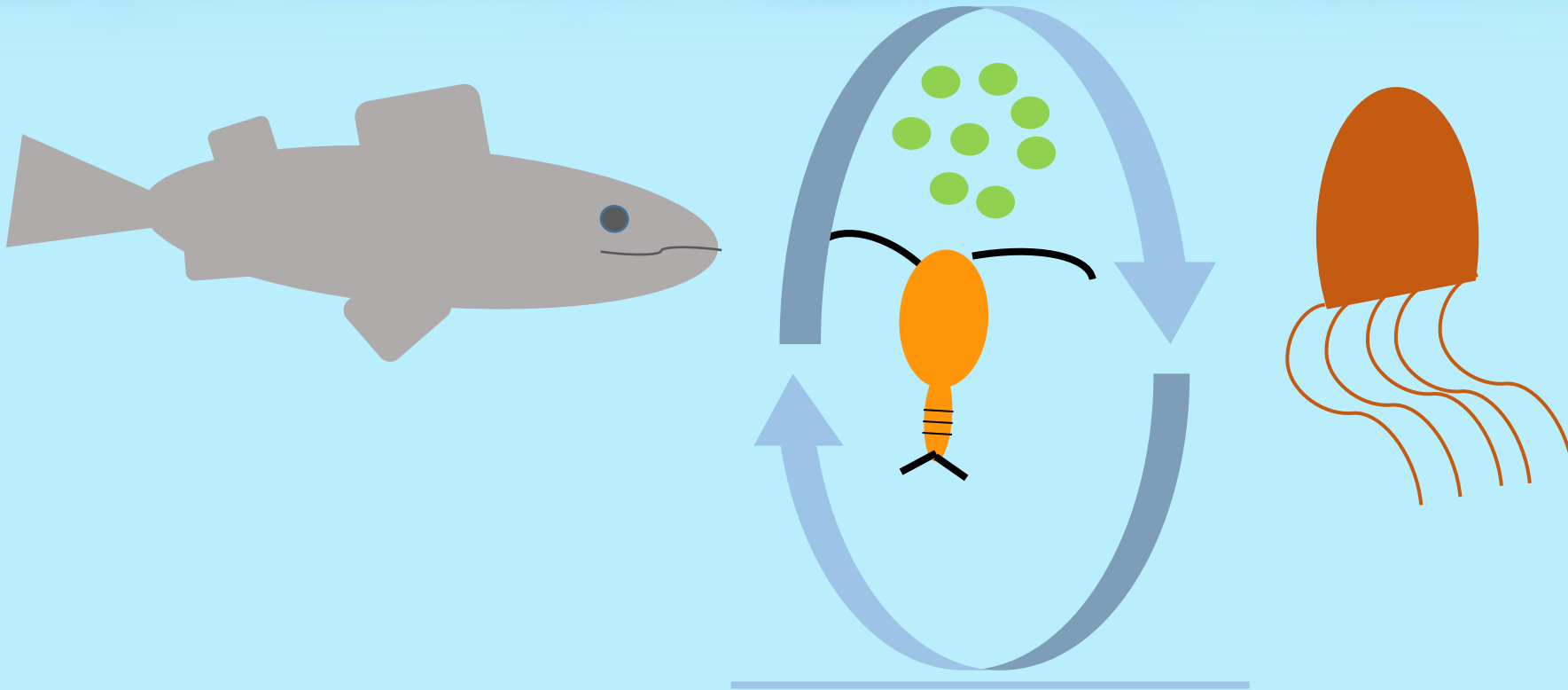
Kristina Øie Kvile
CEES – University of Oslo

Climate responses of
Calanus finmarchicus in a
high latitude system

ICES/PICES 6ZPS 2016/S7

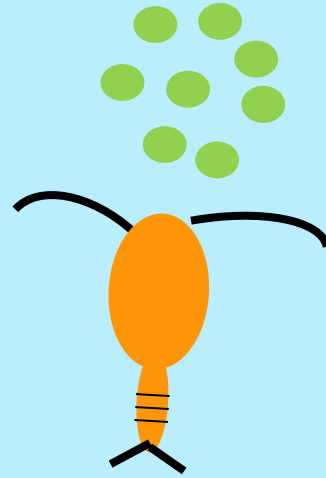
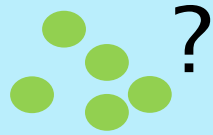
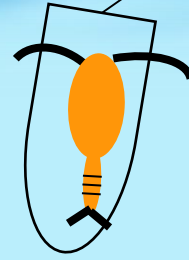


Introduction



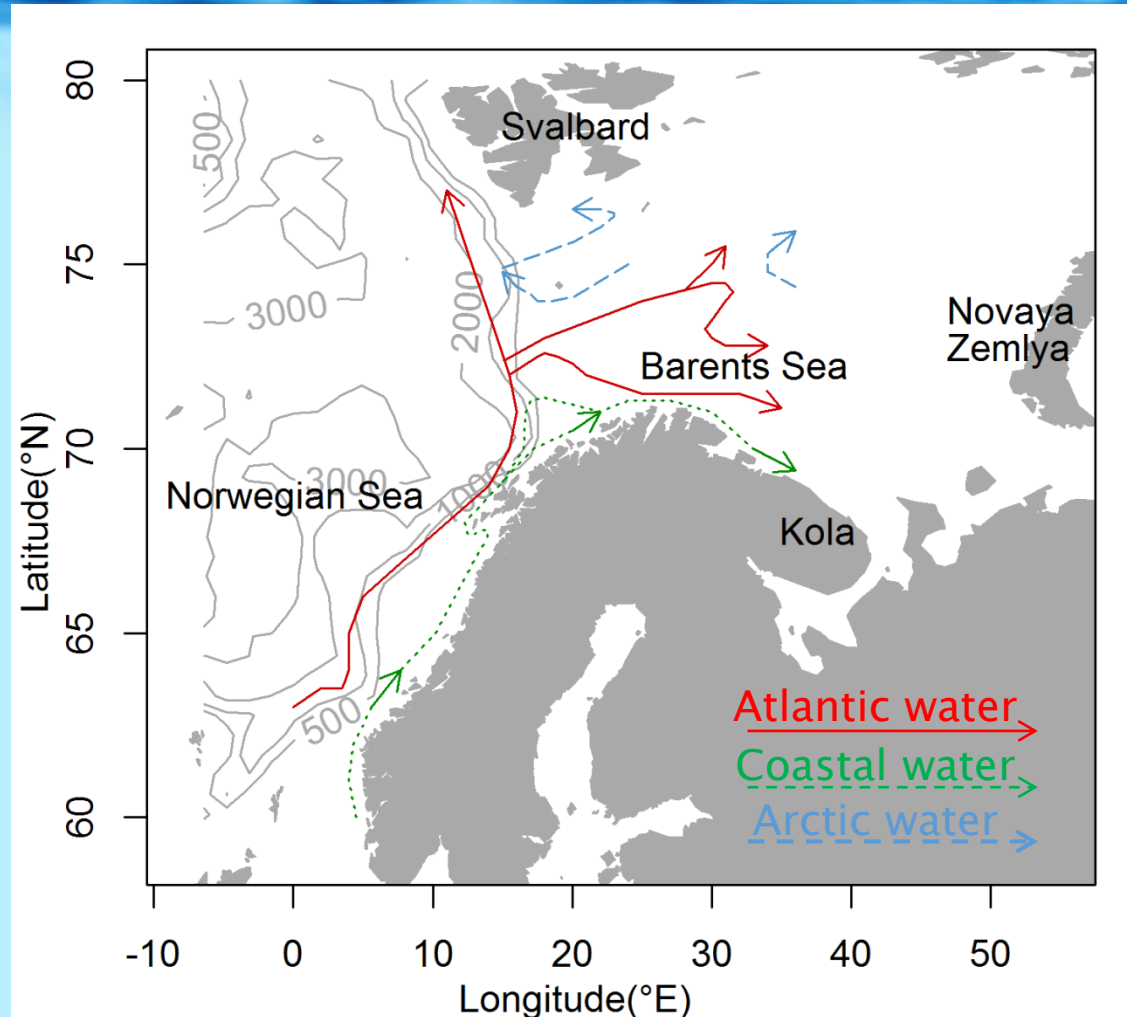


Introduction



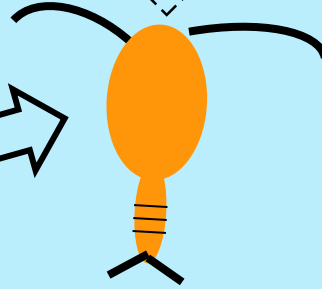
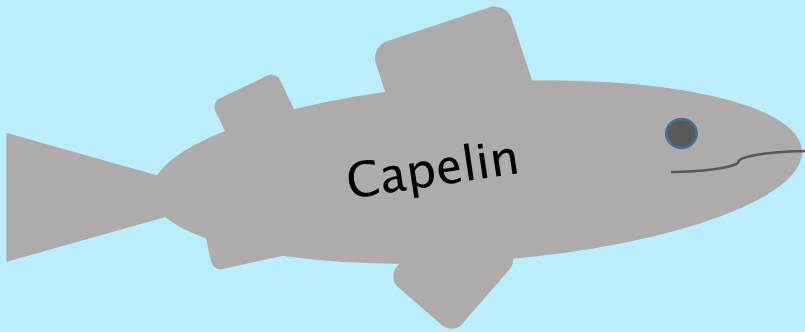
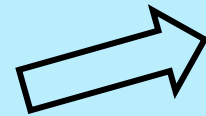
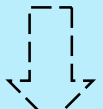
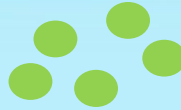
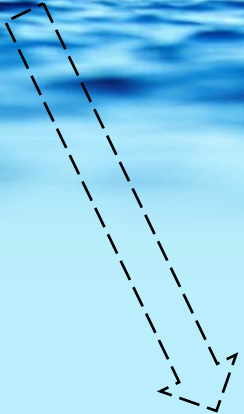
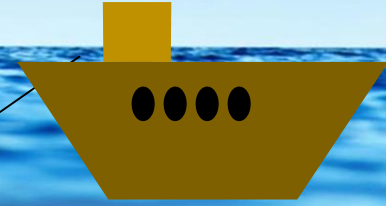
Introduction

Calanus finmarchicus





Introduction

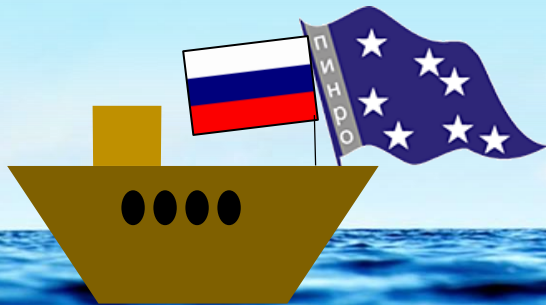


Limited area

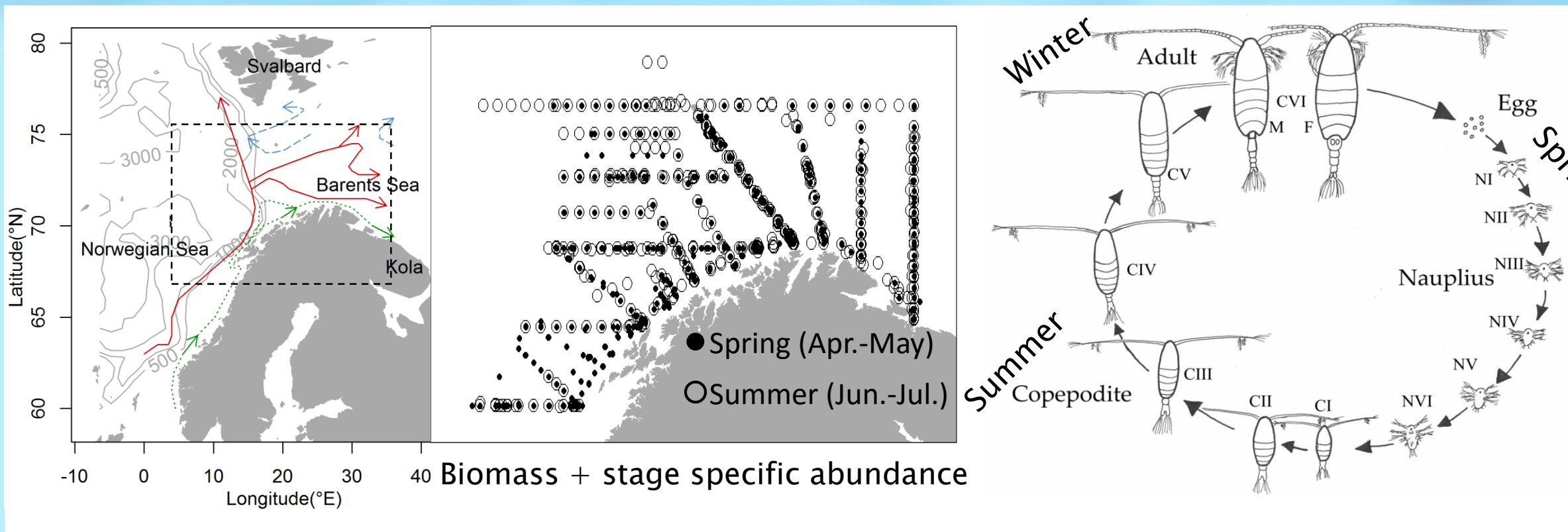
Few years

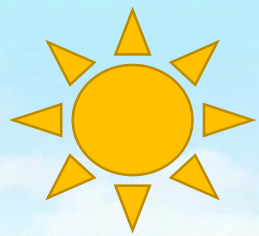
Aggregated

Autumn



Methods





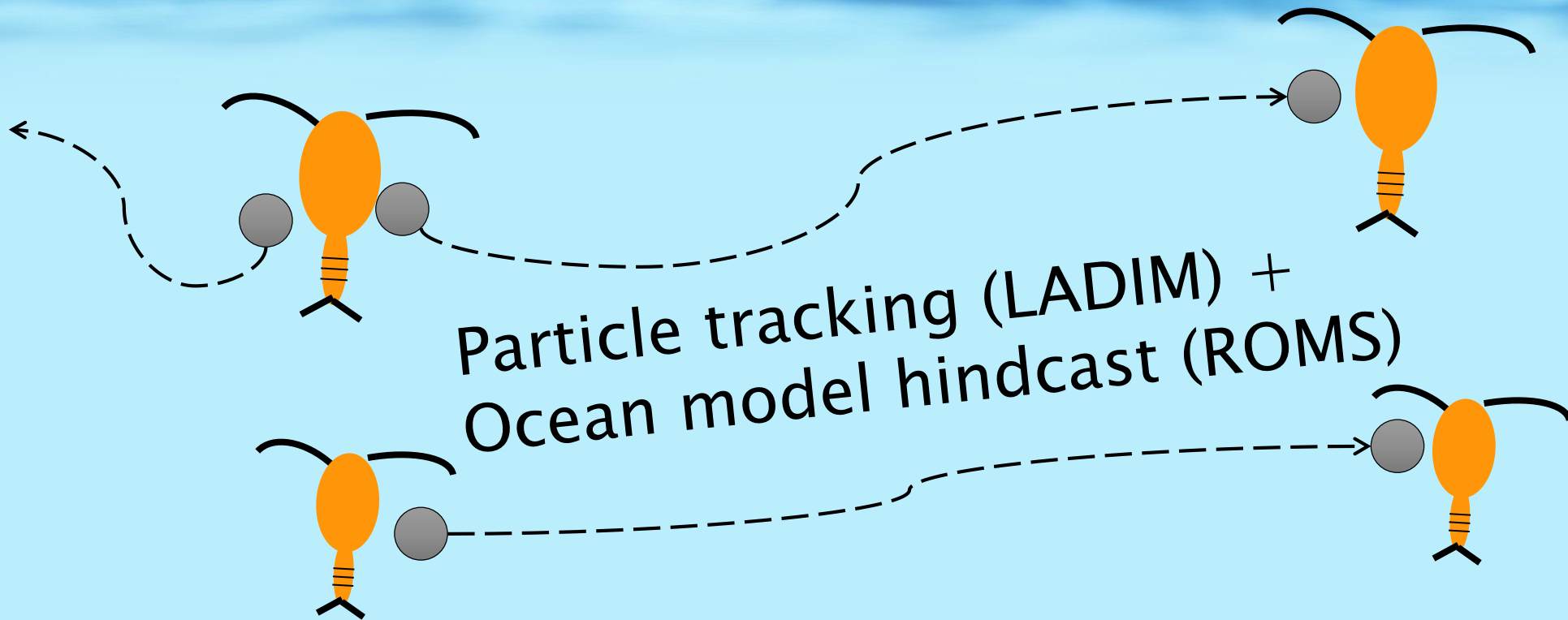
Methods

Eggs?

Spring samples

Summer samples

Particle tracking (LADIM) +
Ocean model hindcast (ROMS)

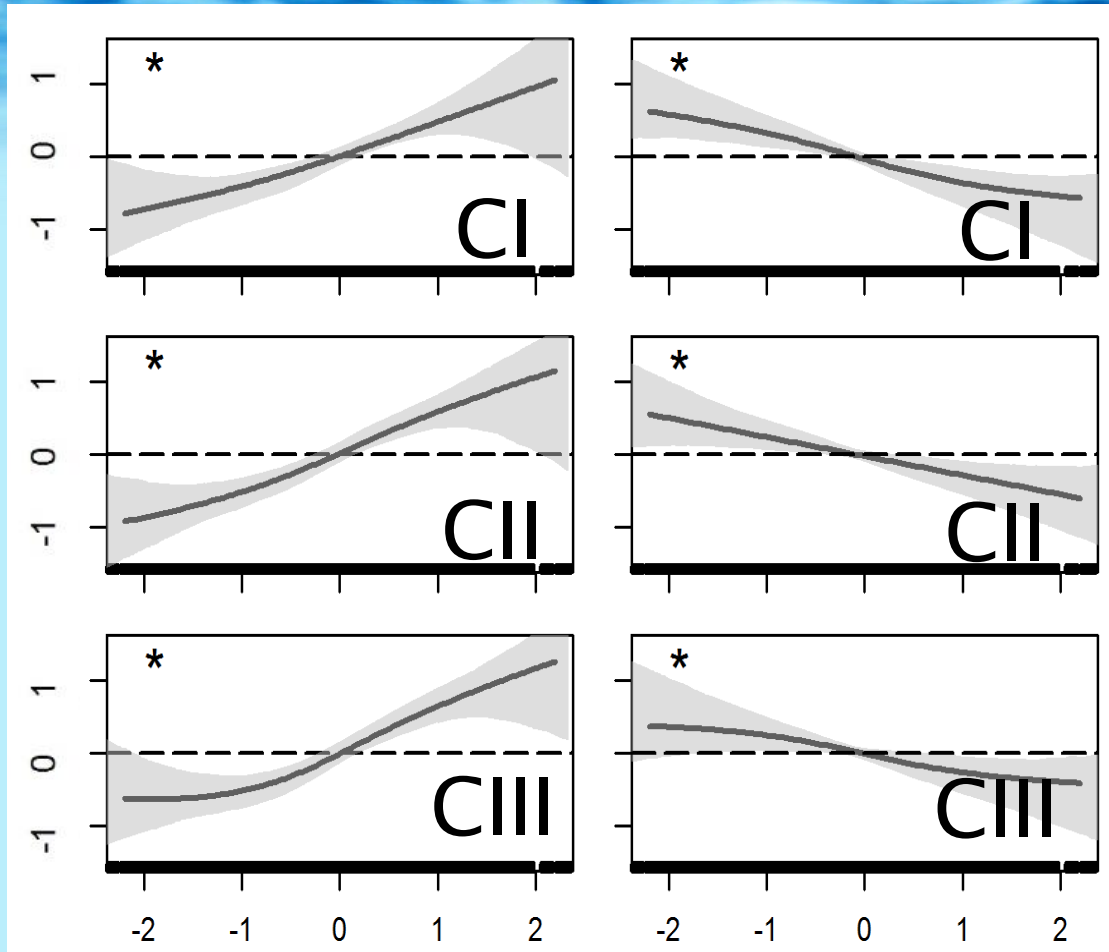


Results

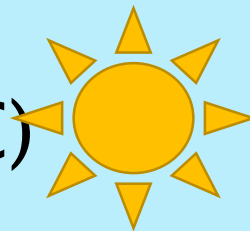
Spring

Summer

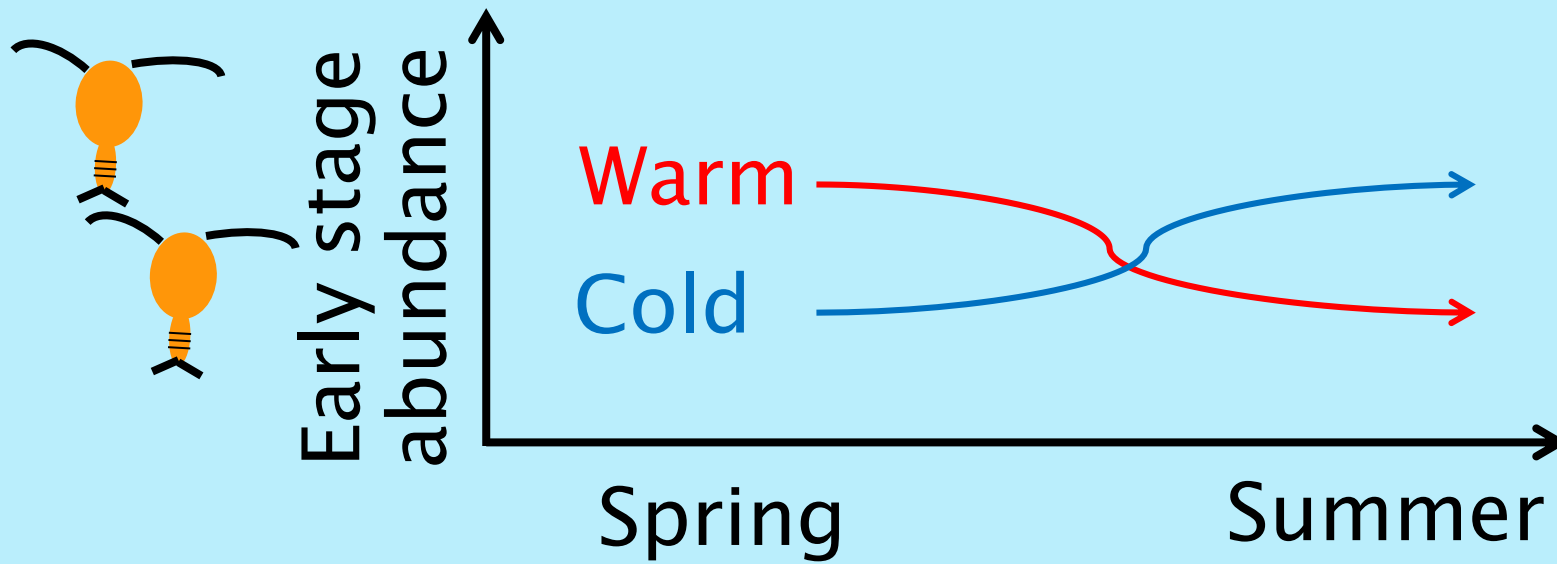
Effect on early stages
(log abundance)



Ambient temperature anomaly (°C)

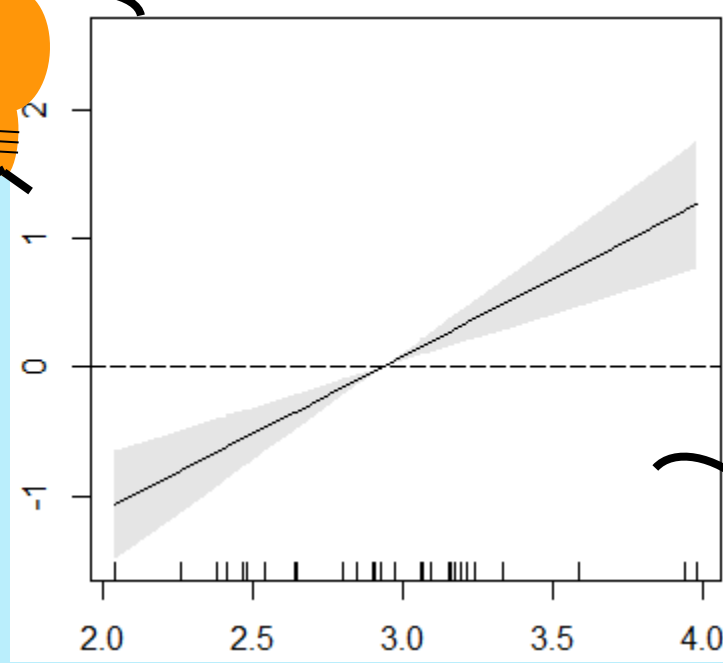


Results

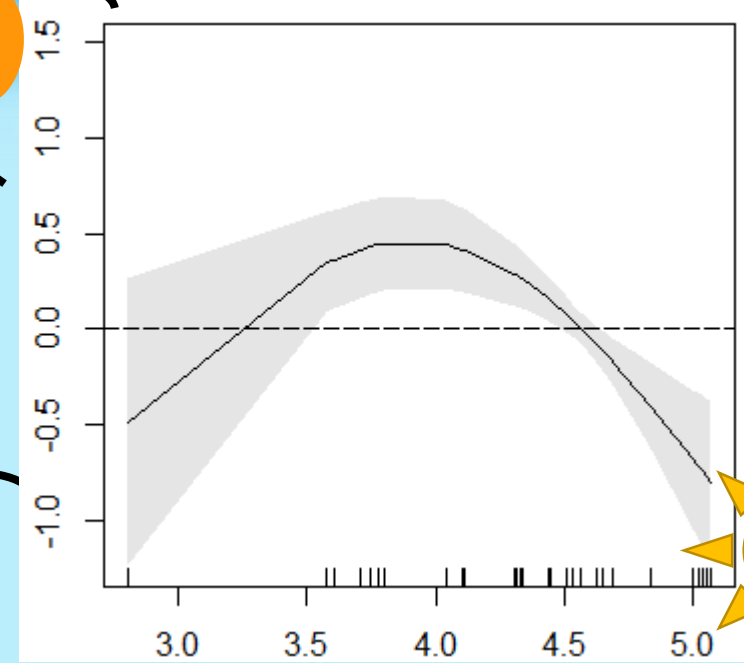


Results

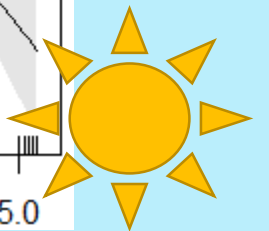
Effect on summer
C. finmarchicus
(log biomass)



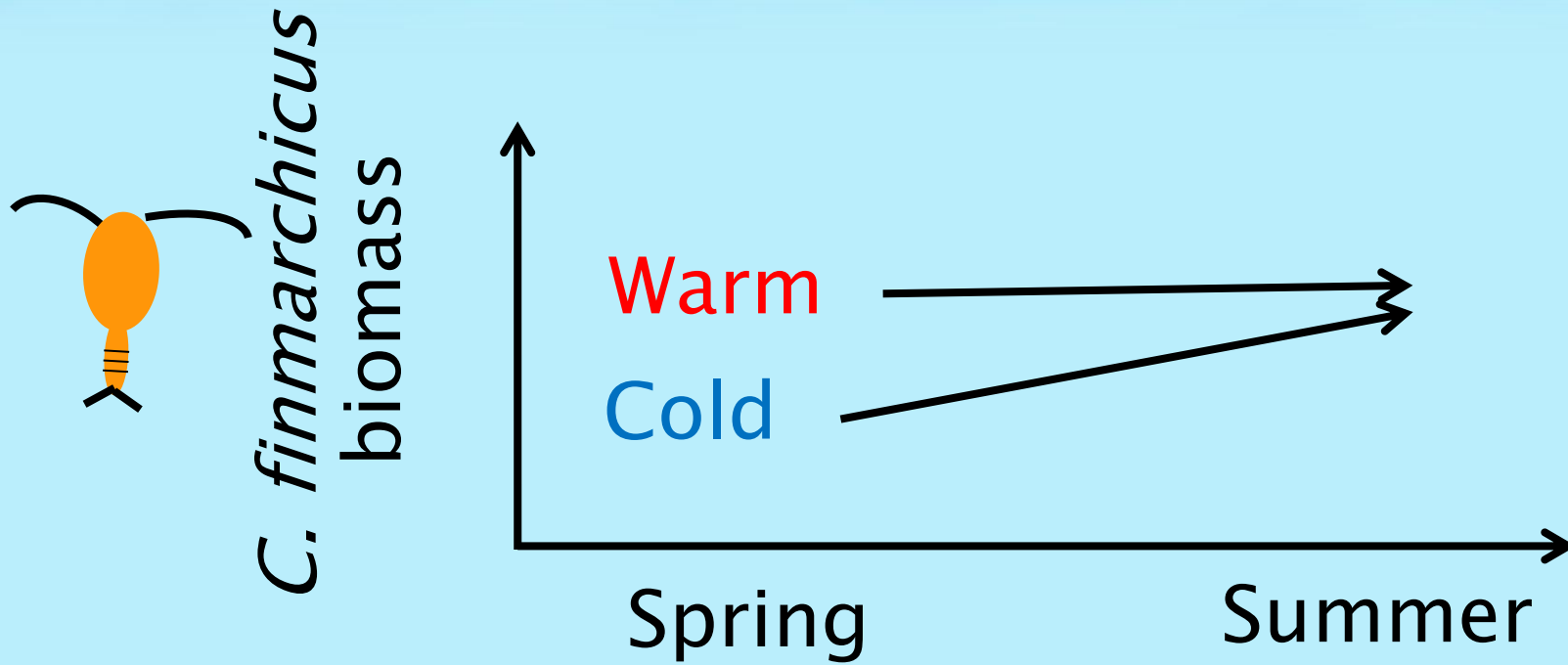
Spring *C. finmarchicus*
(log biomass)



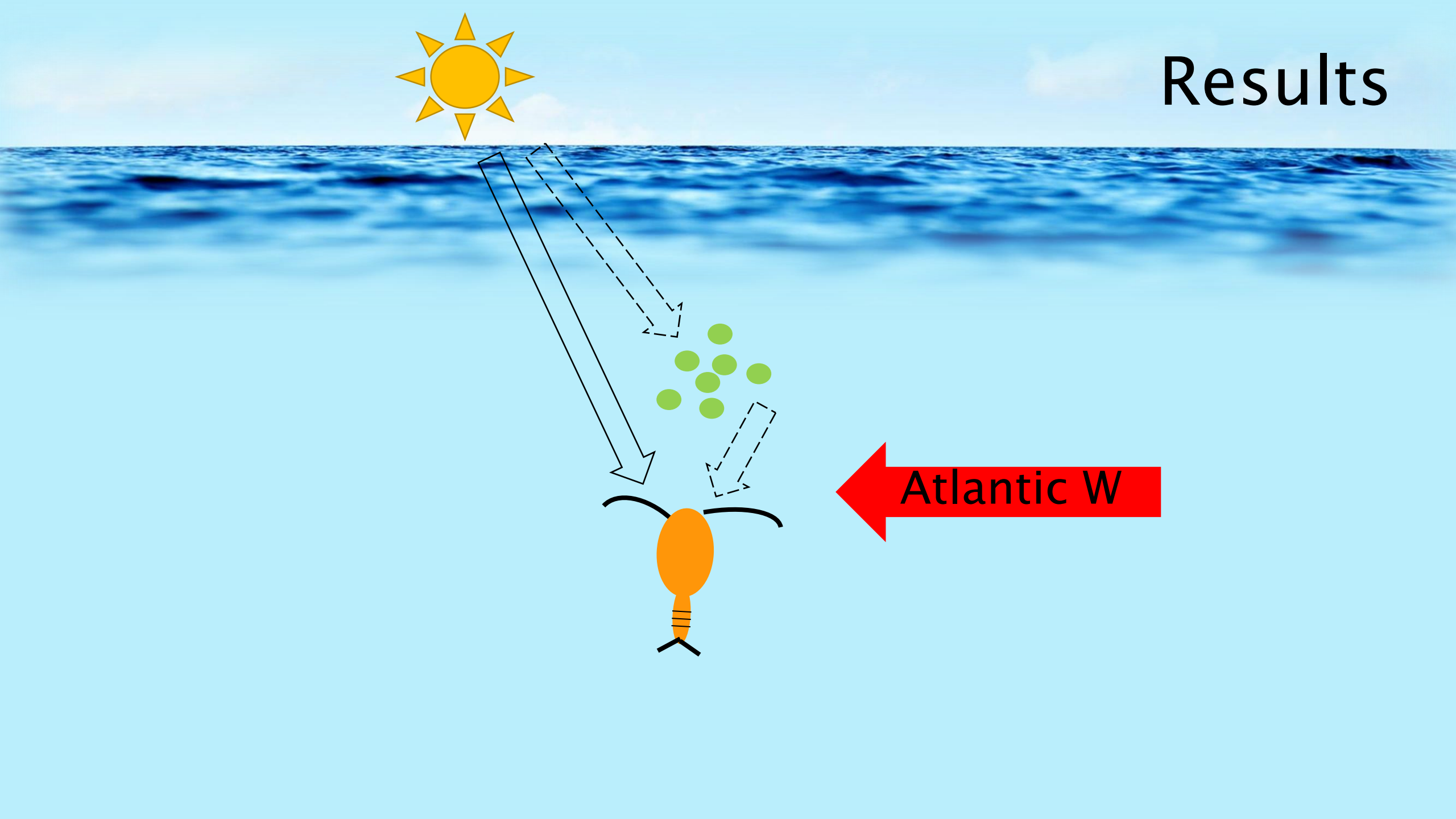
Spring temperature
(°C)

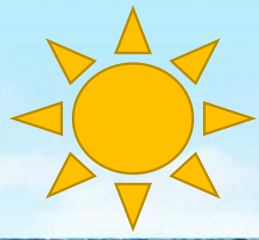


Results

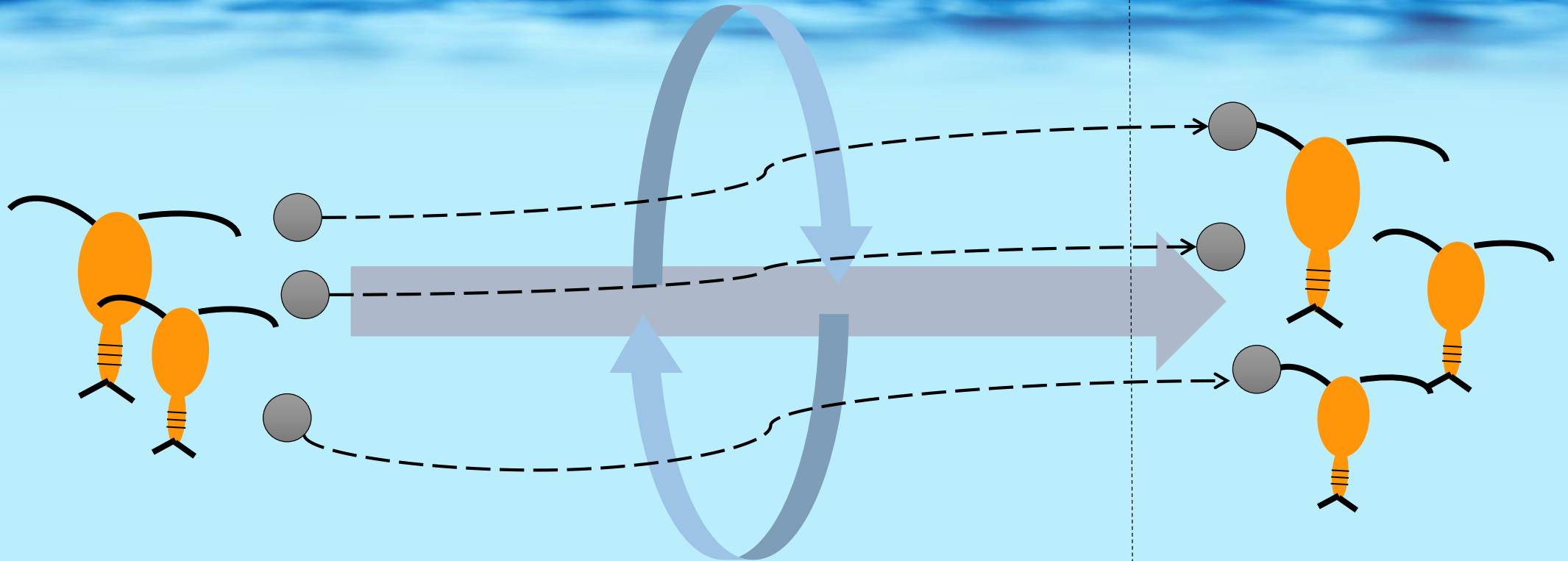


Results





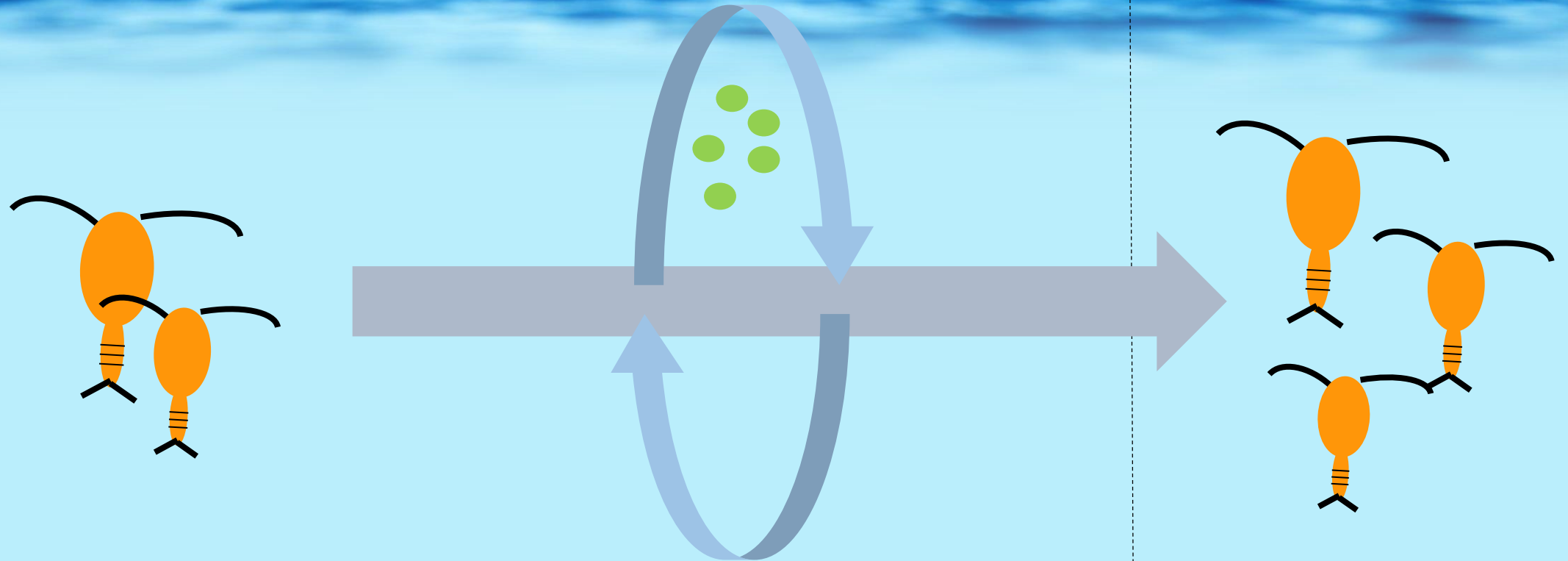
Methods



Spring

Summer

Methods

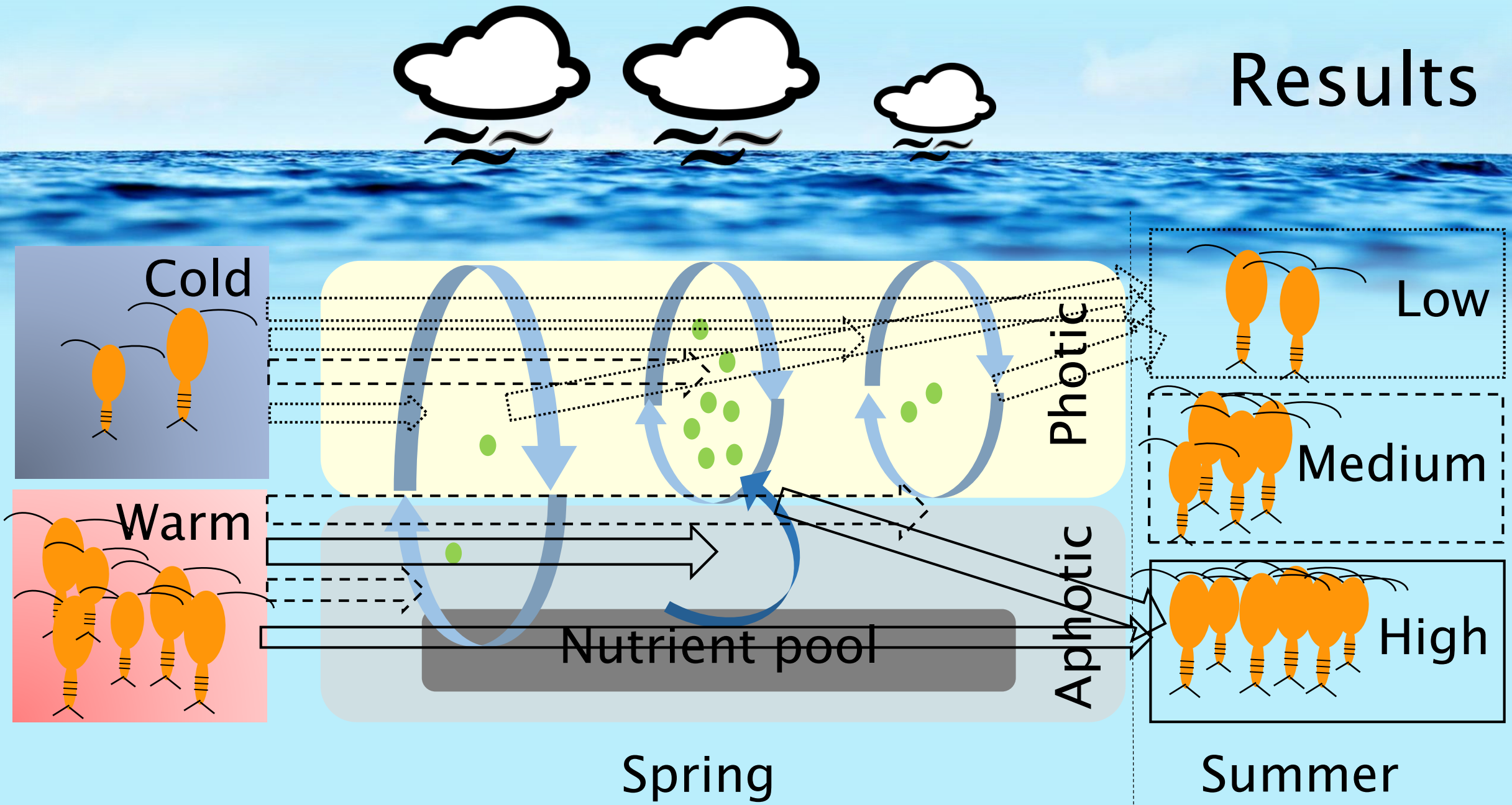


Spring

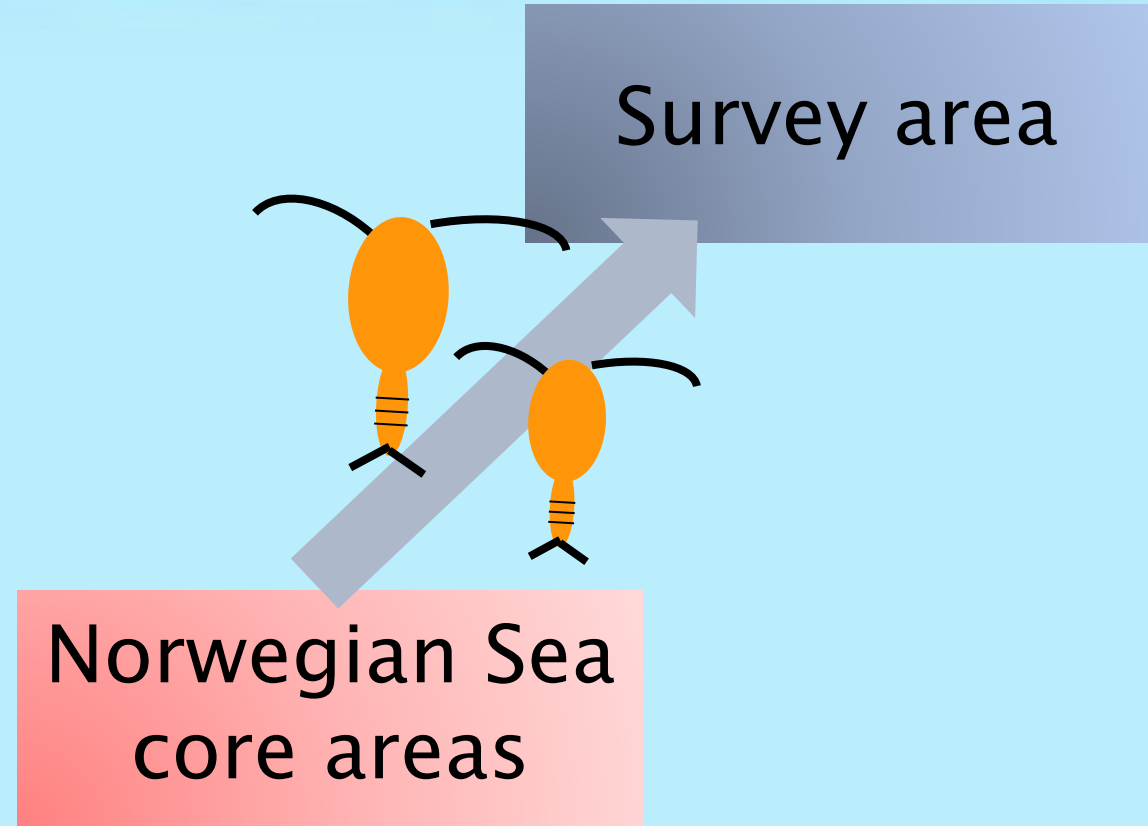
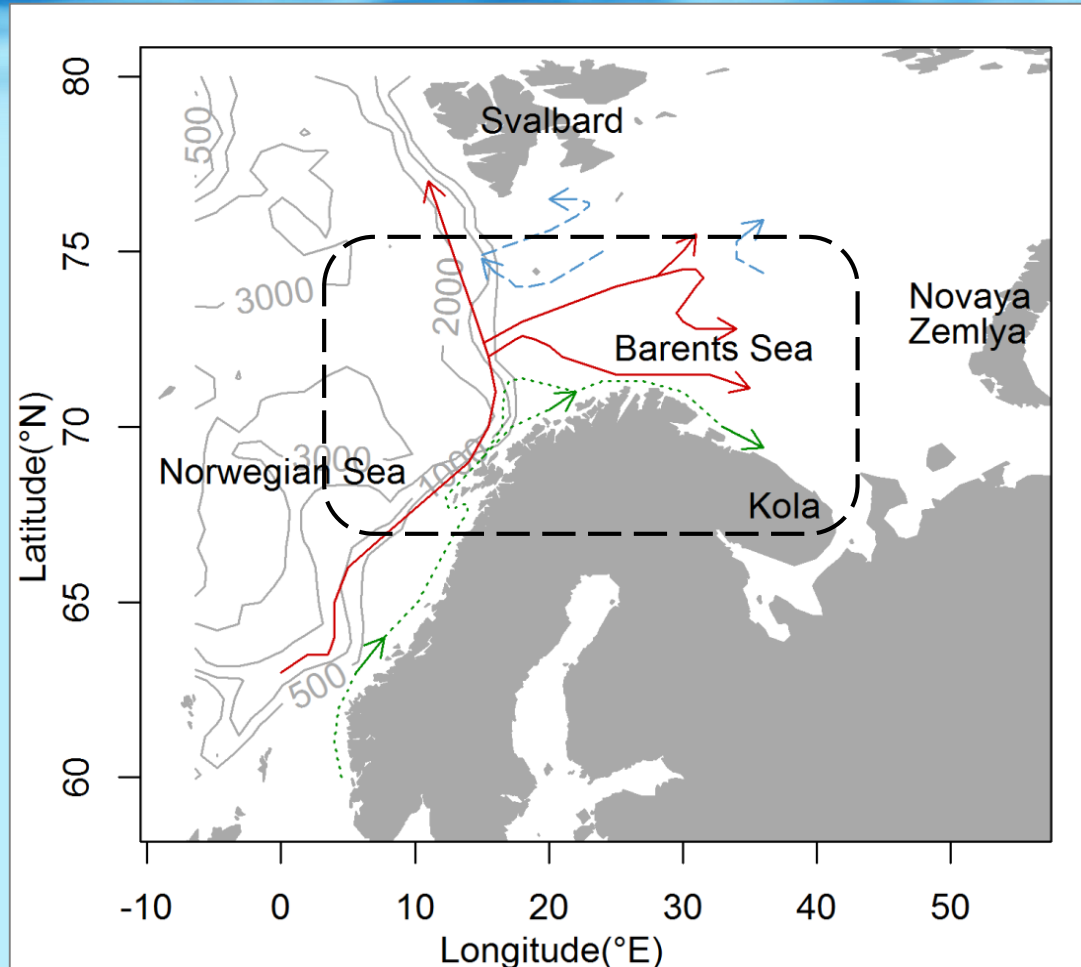
Summer

Kvile et al. 2016 *PNAS*

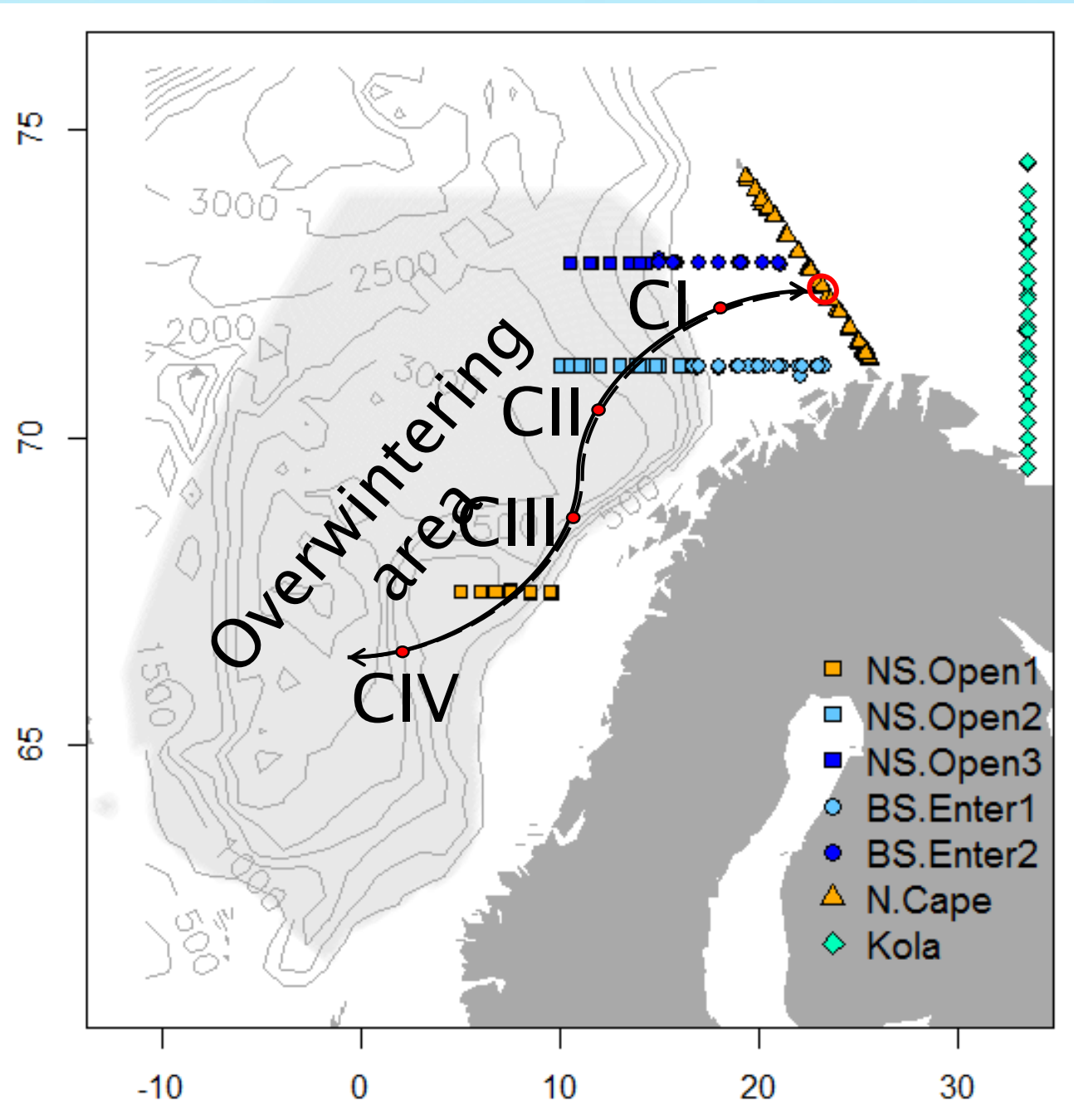
Results



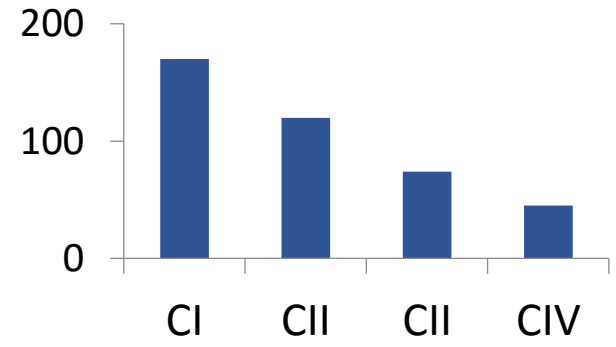
Results



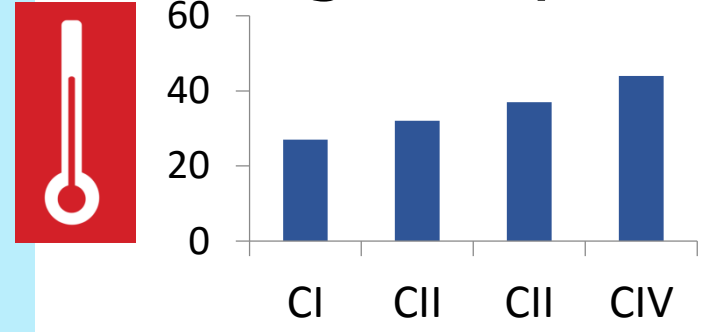
Methods



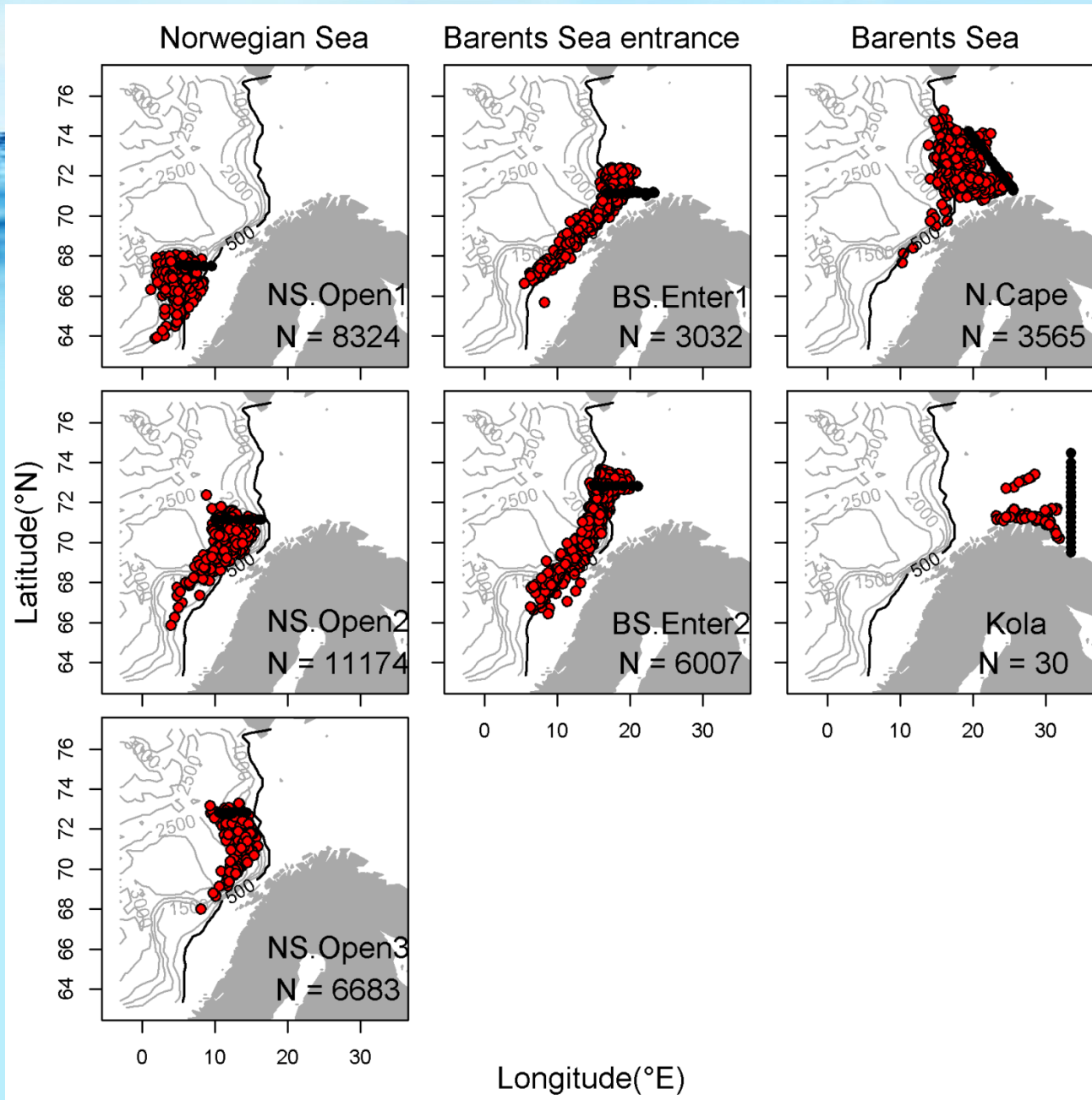
Copepodites / m³



Age (days)



Results



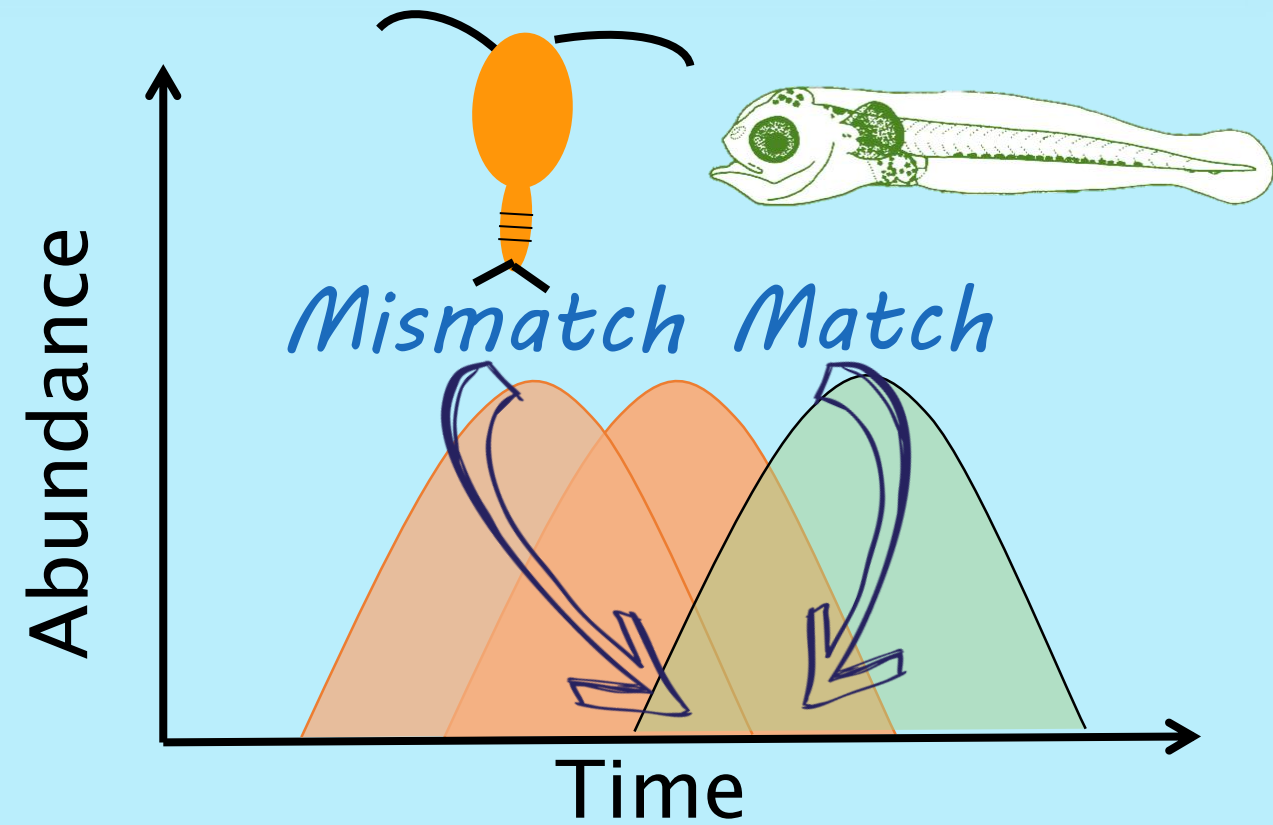
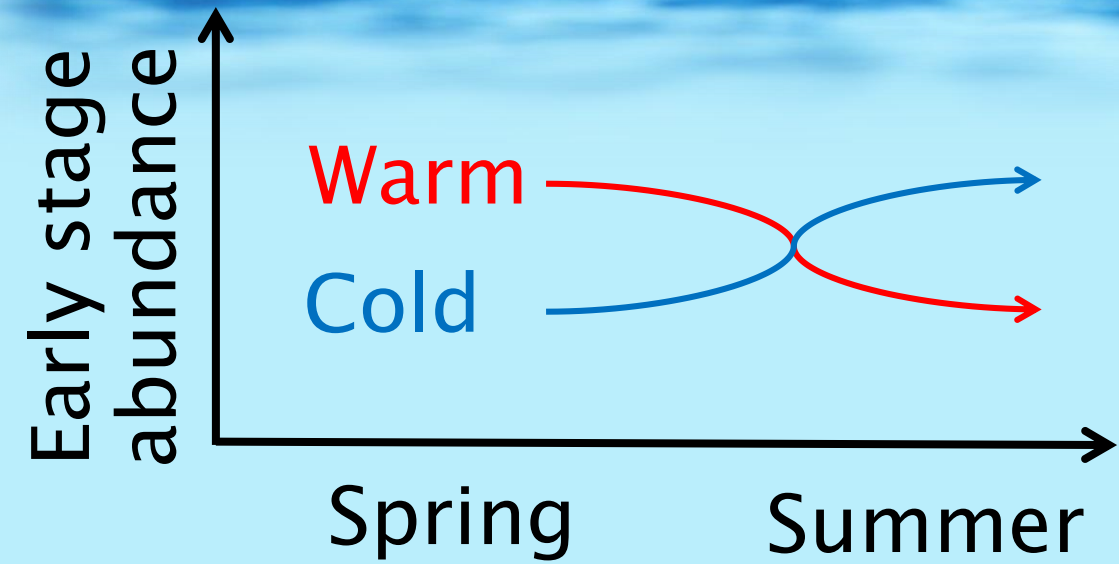
- Survey station
- Back-calculated spawning location

N: Number of particles sampled

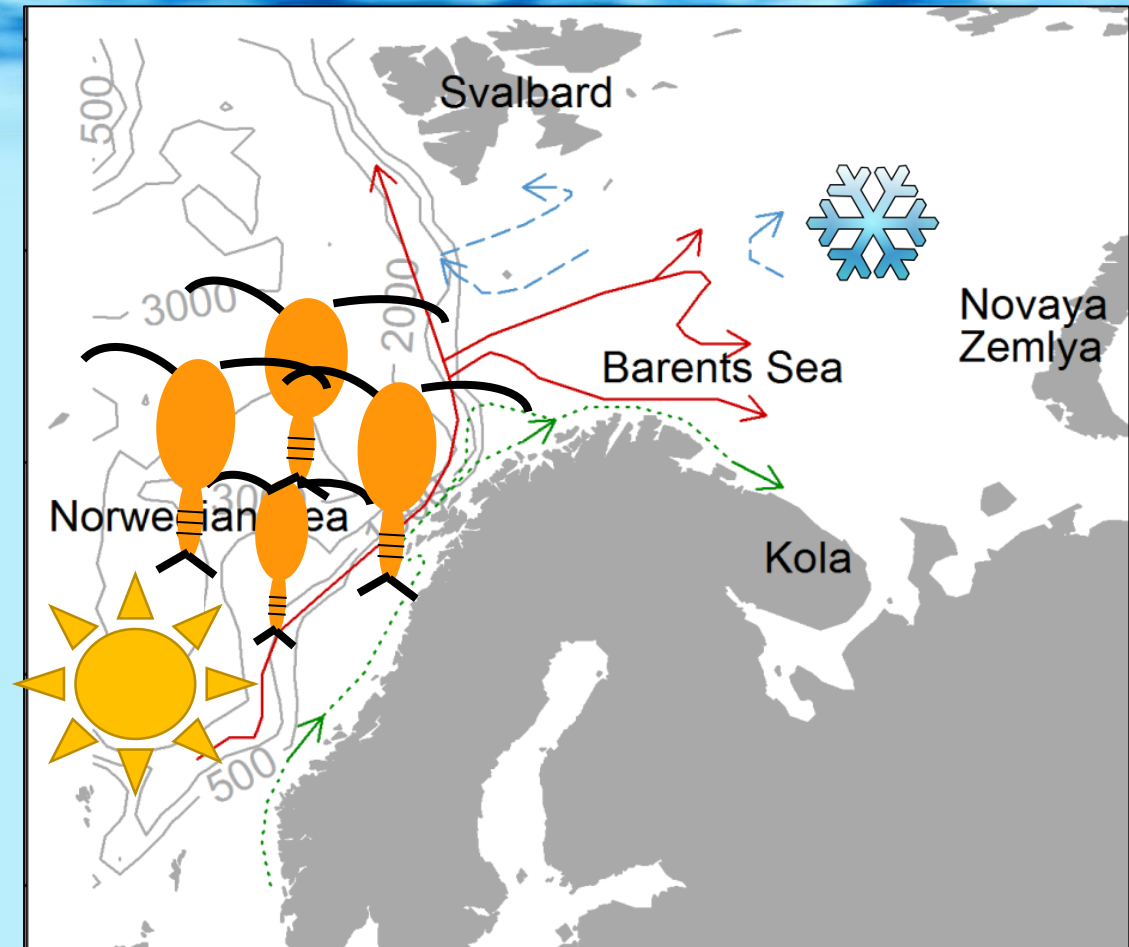
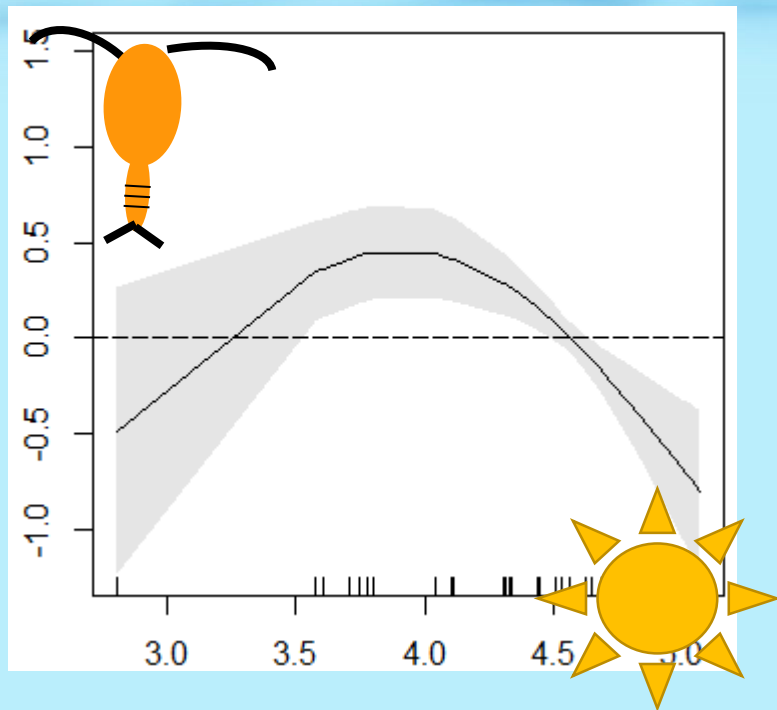


Implications

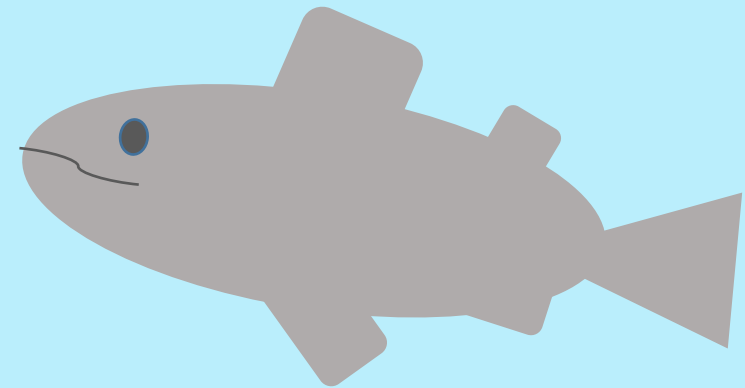
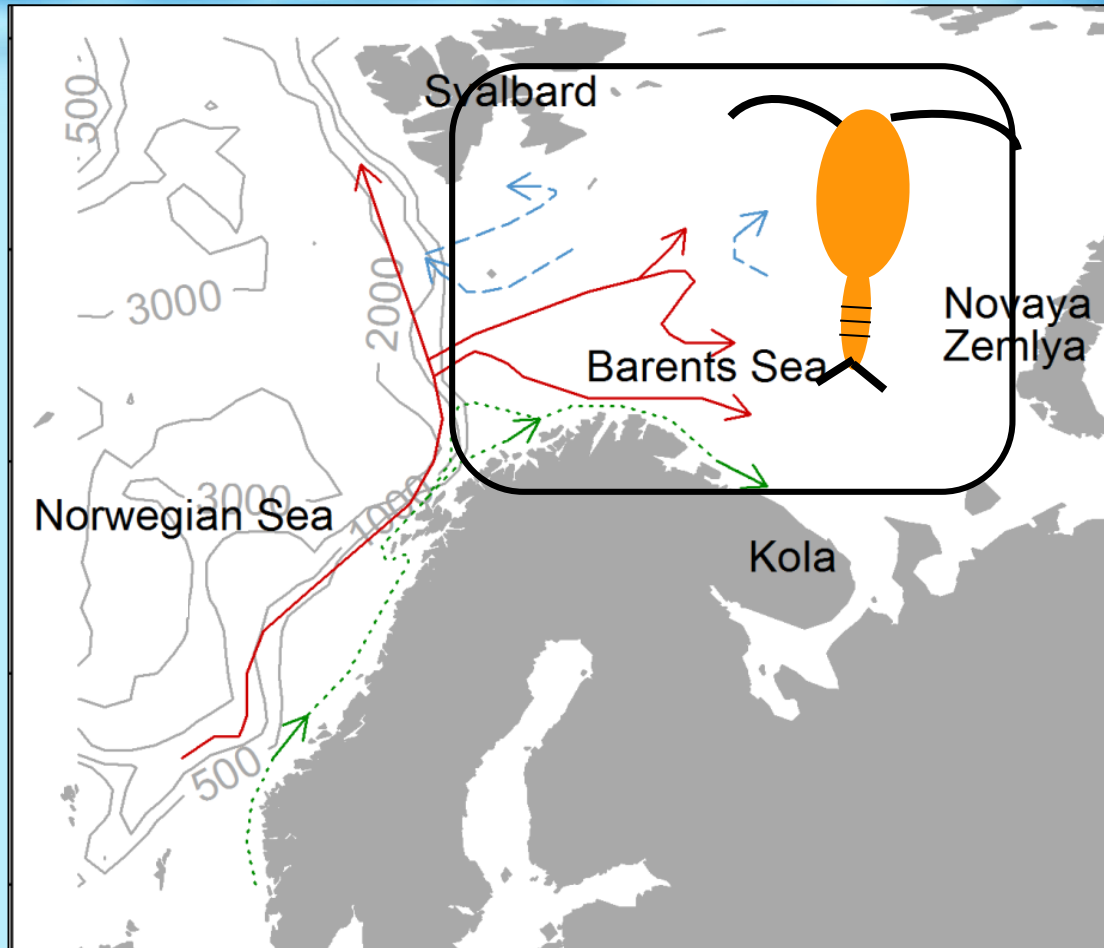
Implications



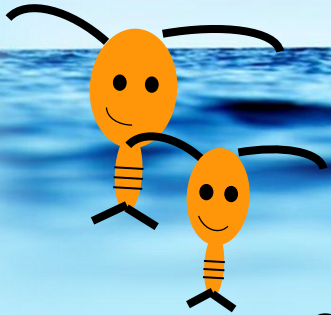
Implications



Implications



Thank you for your attention



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SVIM, SUSTAIN