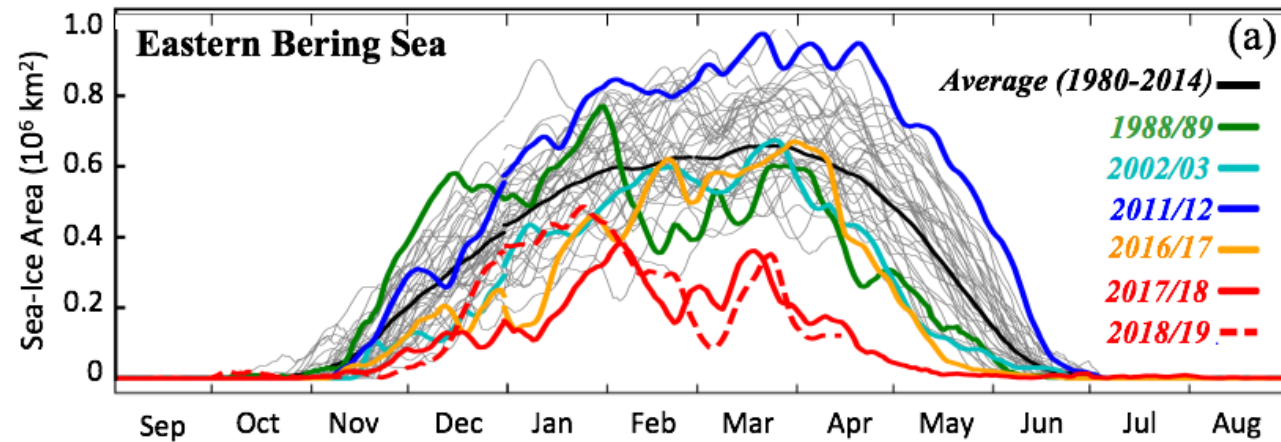
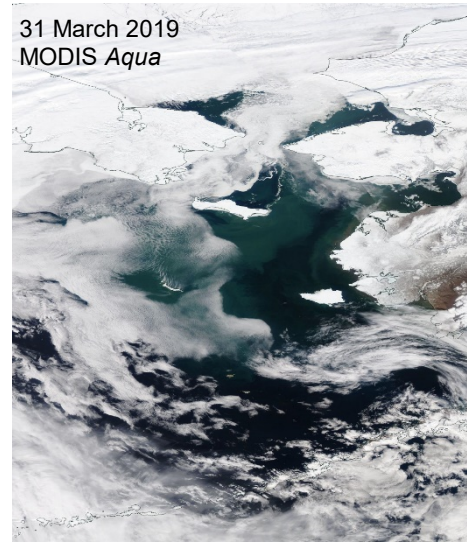
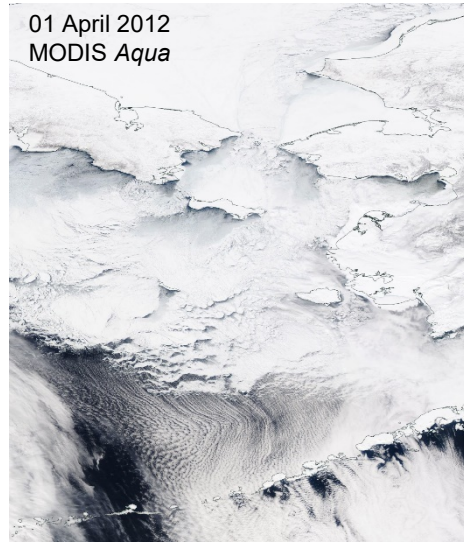


DBO1
and
the long-term mooring M8

Phyllis Stabeno
EcoFOCI, Pacific Marine Environmental Laboratory, Seattle, Washington

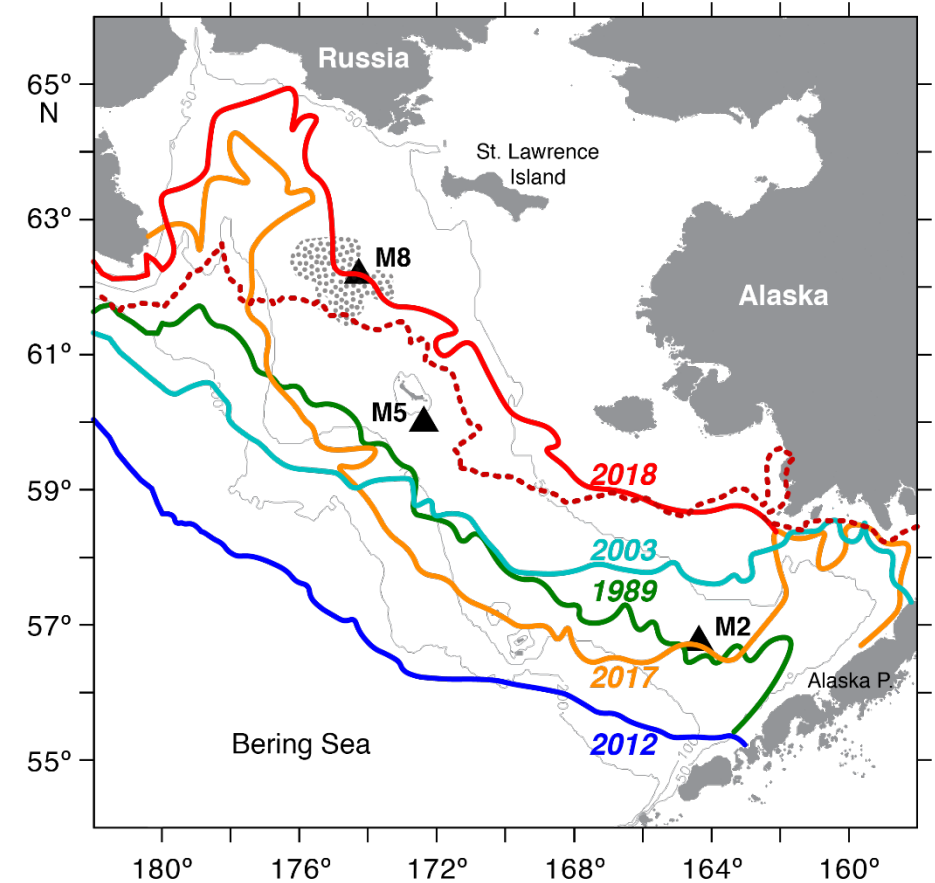
Sea ice in the Eastern Bering Sea



Areal Ice extent on eastern Bering Sea

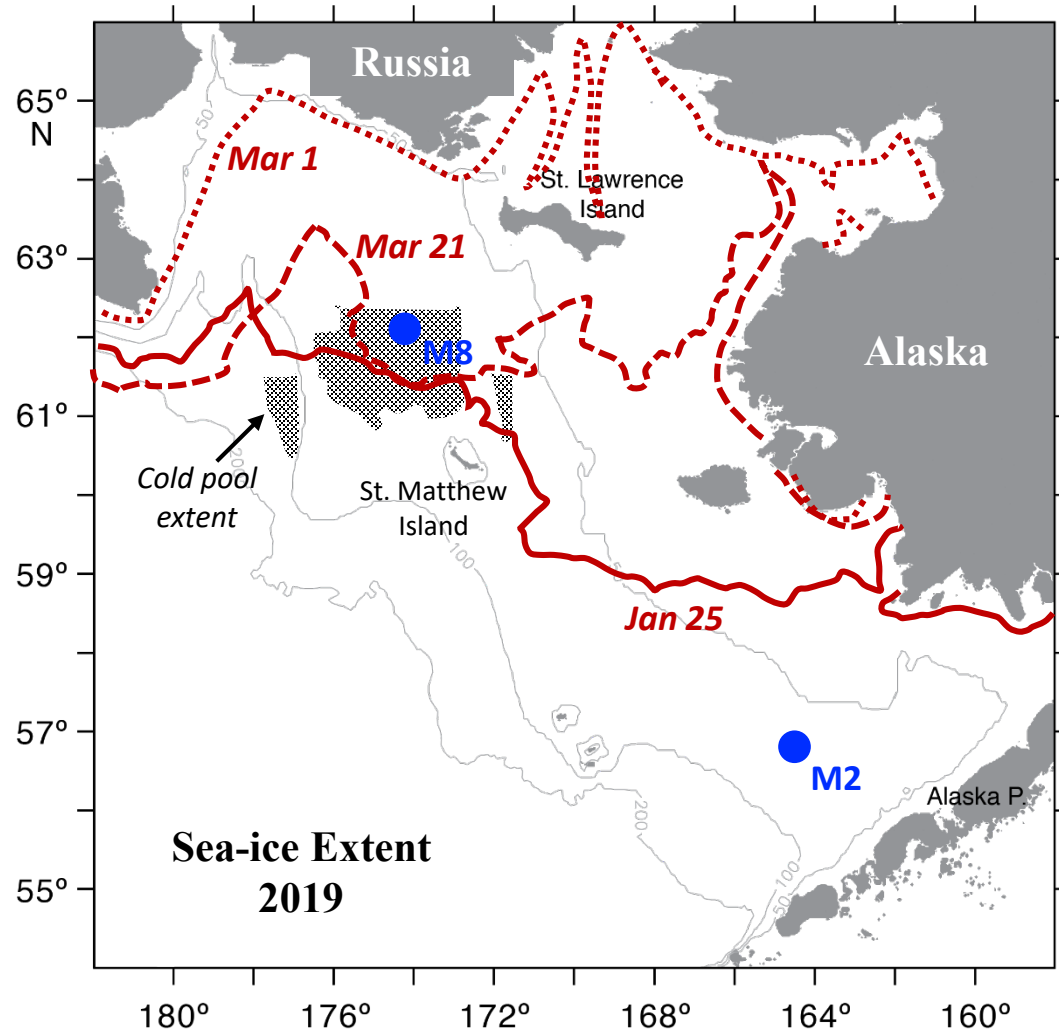
Dates of Maximum Ice Extent

31 January 1989	21 March 2003	20 March 2012
3 April 2017	17 March 2018	25 January 2019

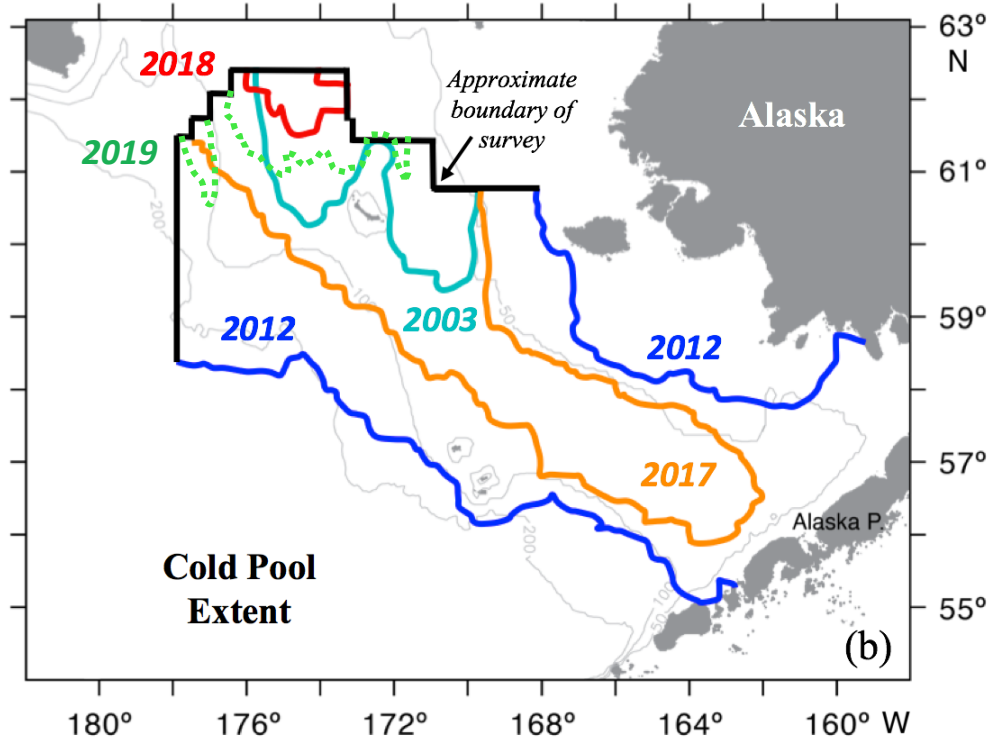


Maximum Ice Extent

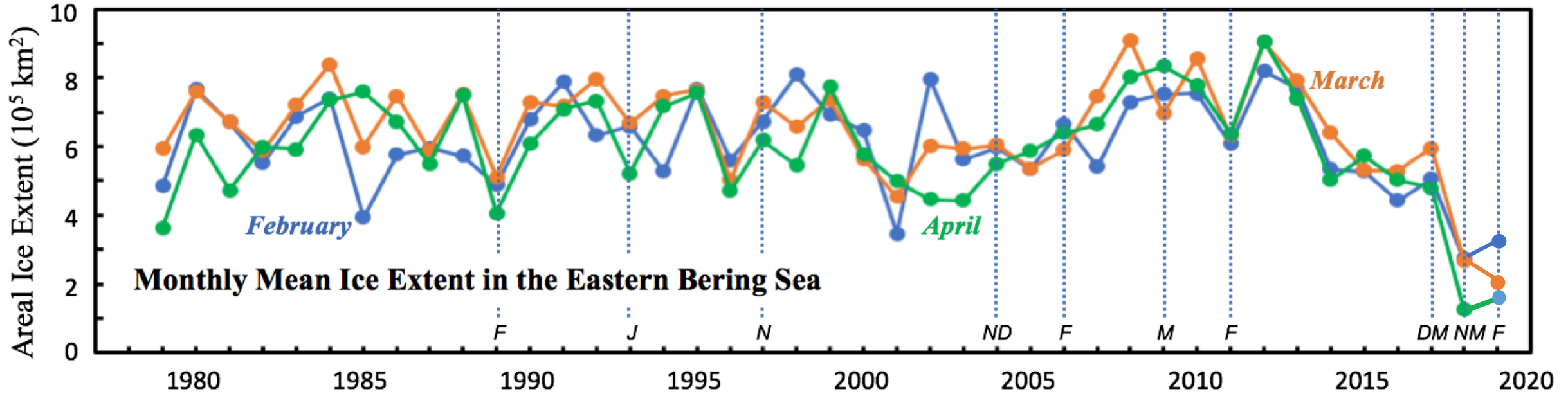
Sea ice in the Eastern Bering Sea



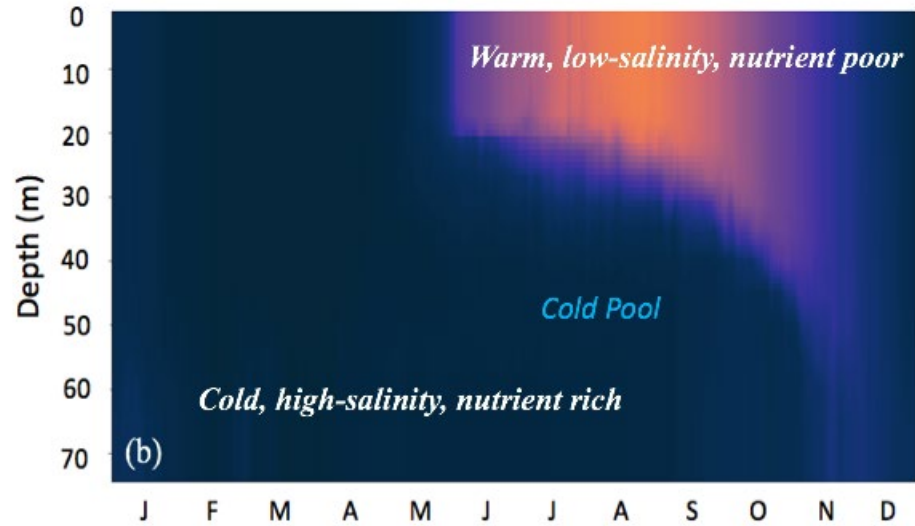
Areal ice cover eastern Bering Sea



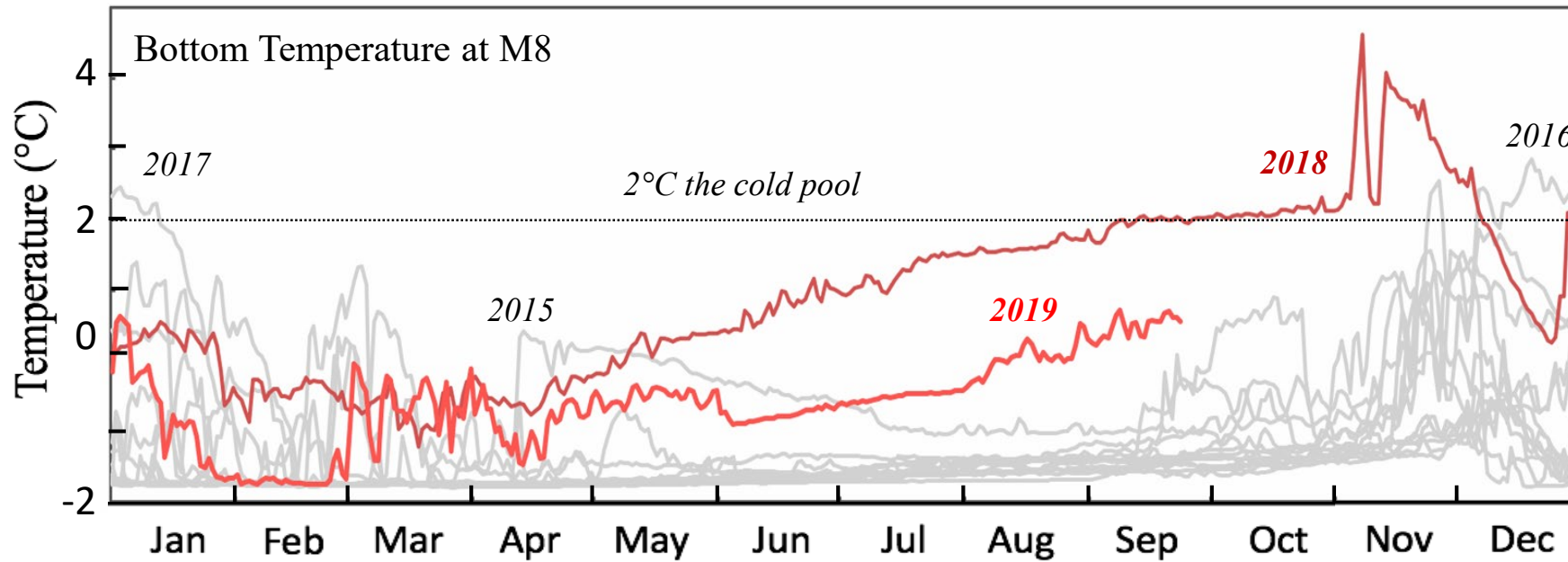
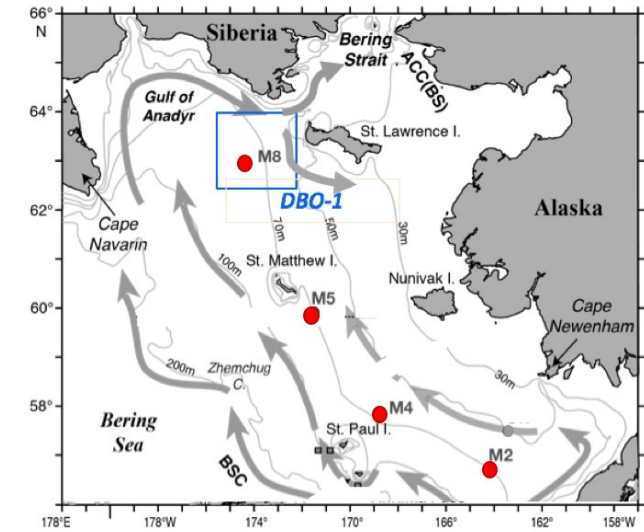
Ice and northward wind events



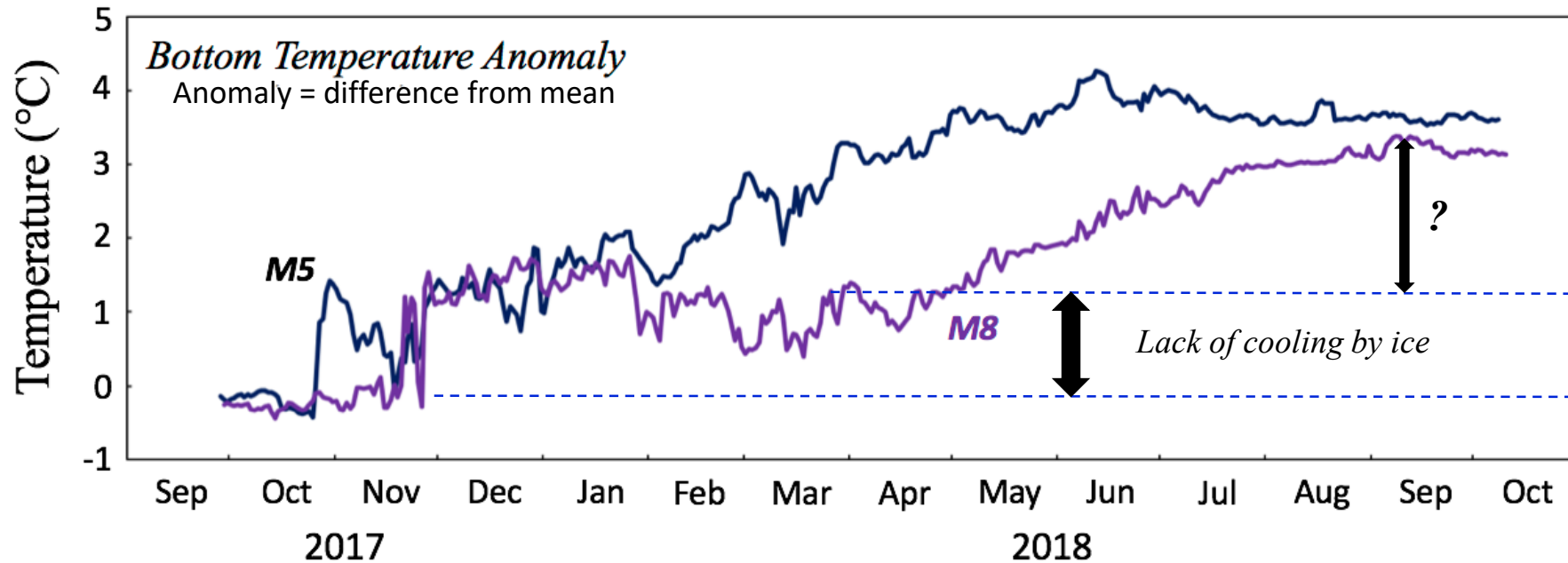
Occurrence of 31-day periods when winds are out of the south



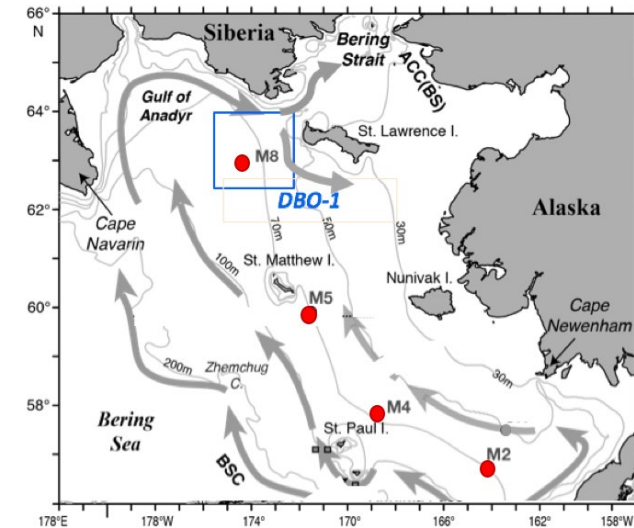
Impacts on the water column at M8



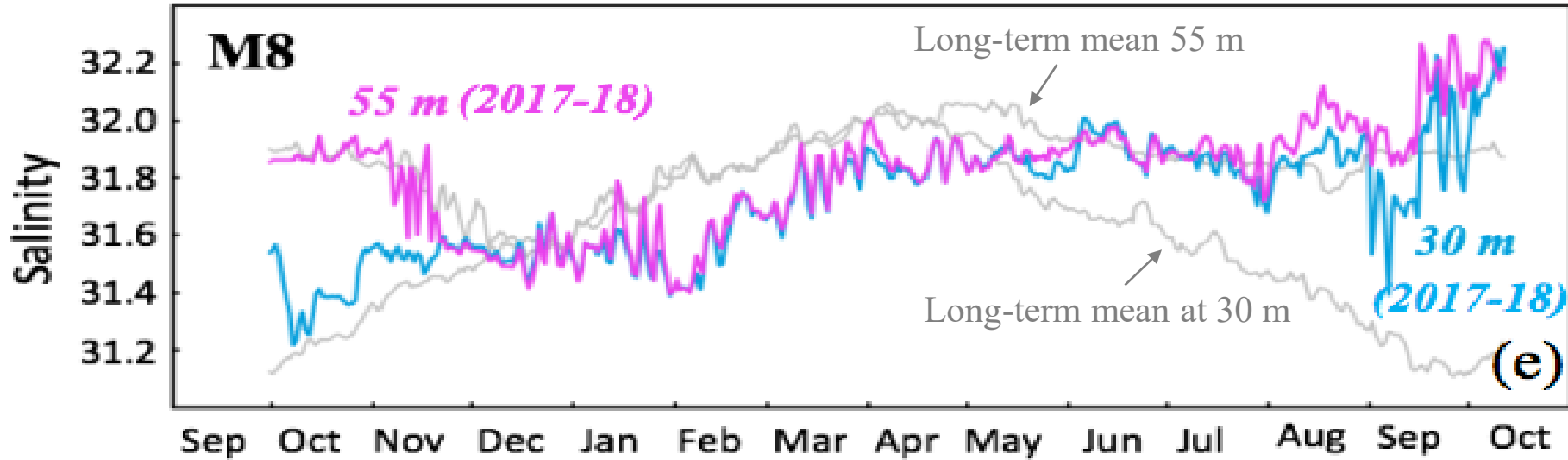
Why was the cold pool so small in 2018? (Anomalies)



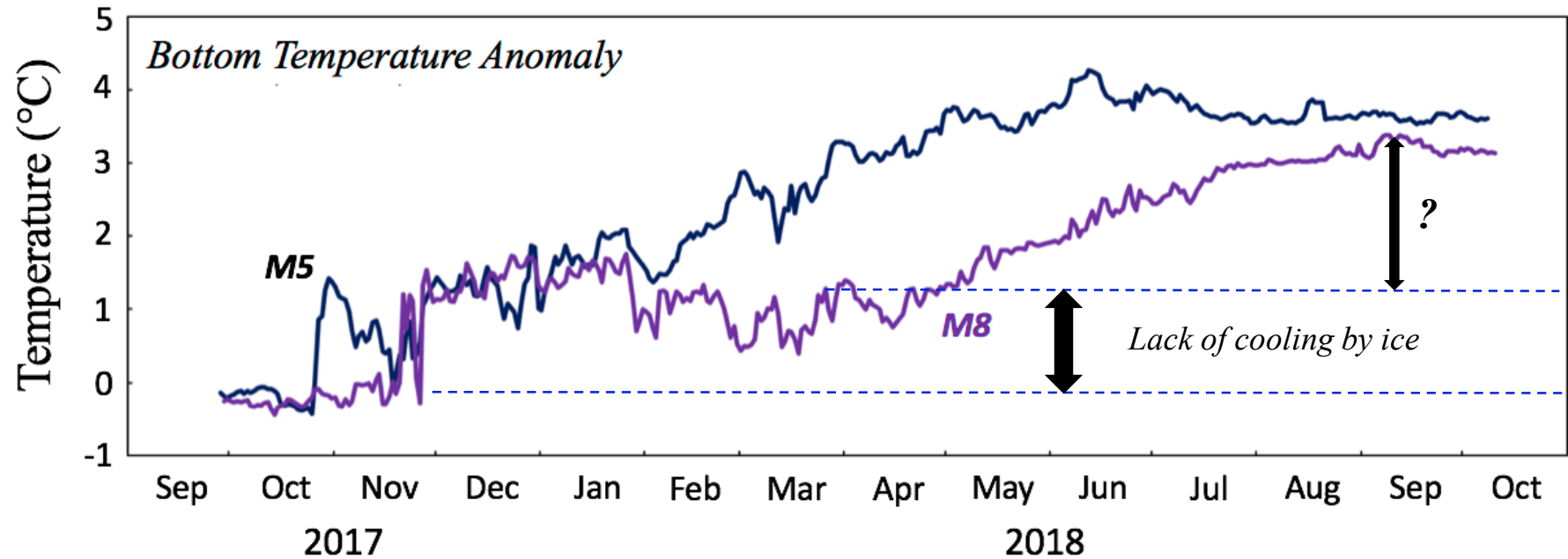
- Nov to April ~ 1°C above normal- directly due to lack of ice
- But after April, bottom temps begin to warm in parallel with atmospheric warming- usually only see that in surface layer. Why is that? ...Salinity...

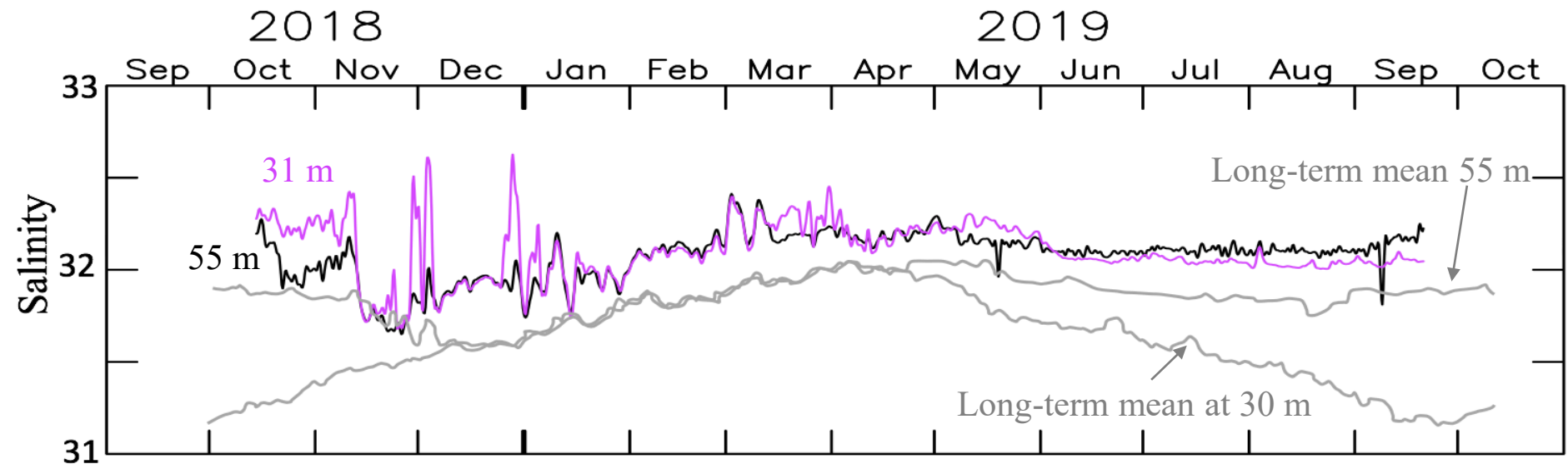


Why did the bottom warm in the summer?

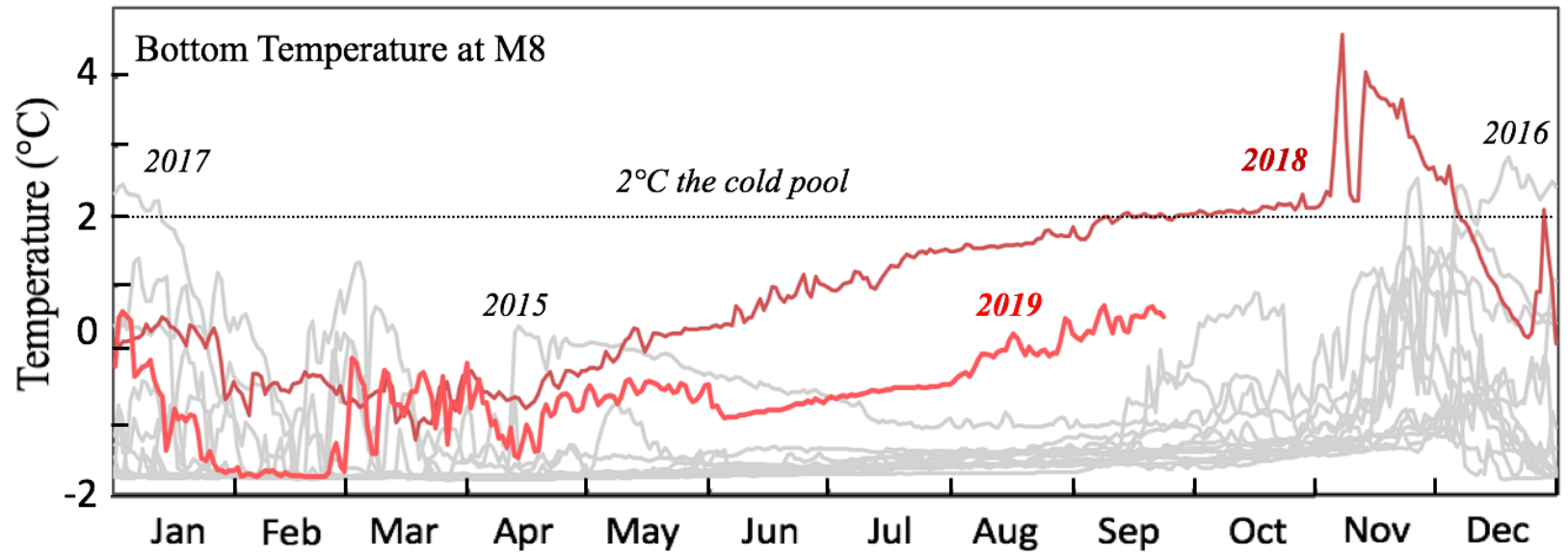


Long-term (2005-2017)

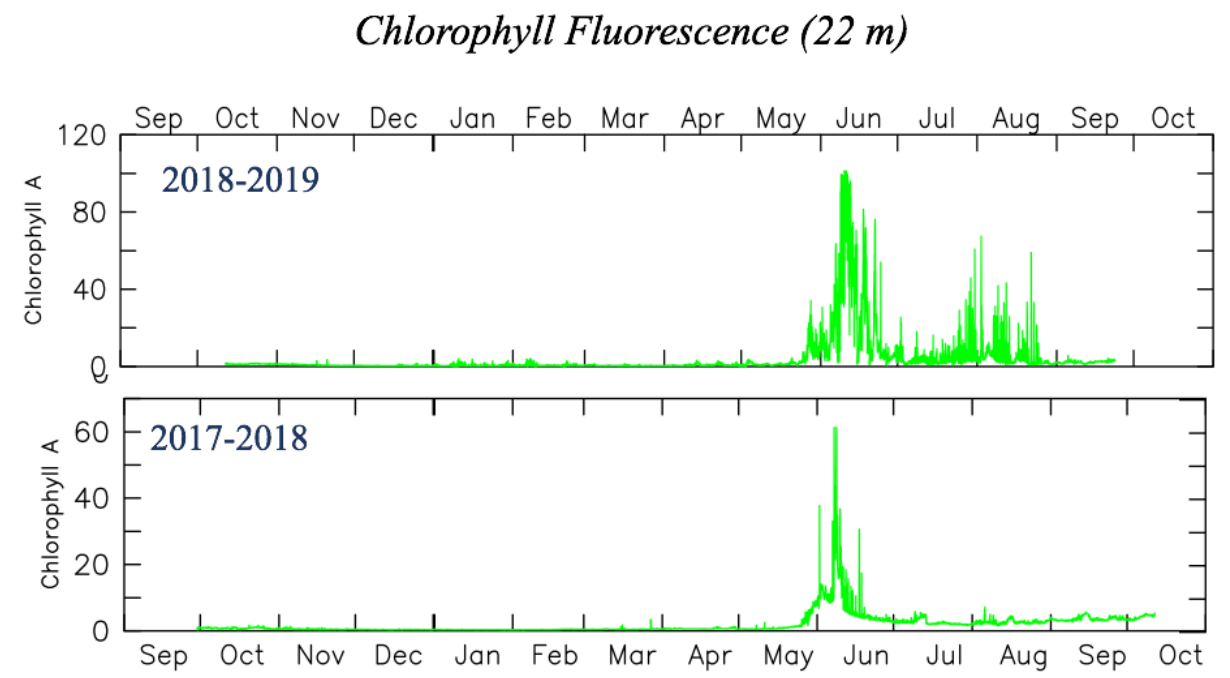
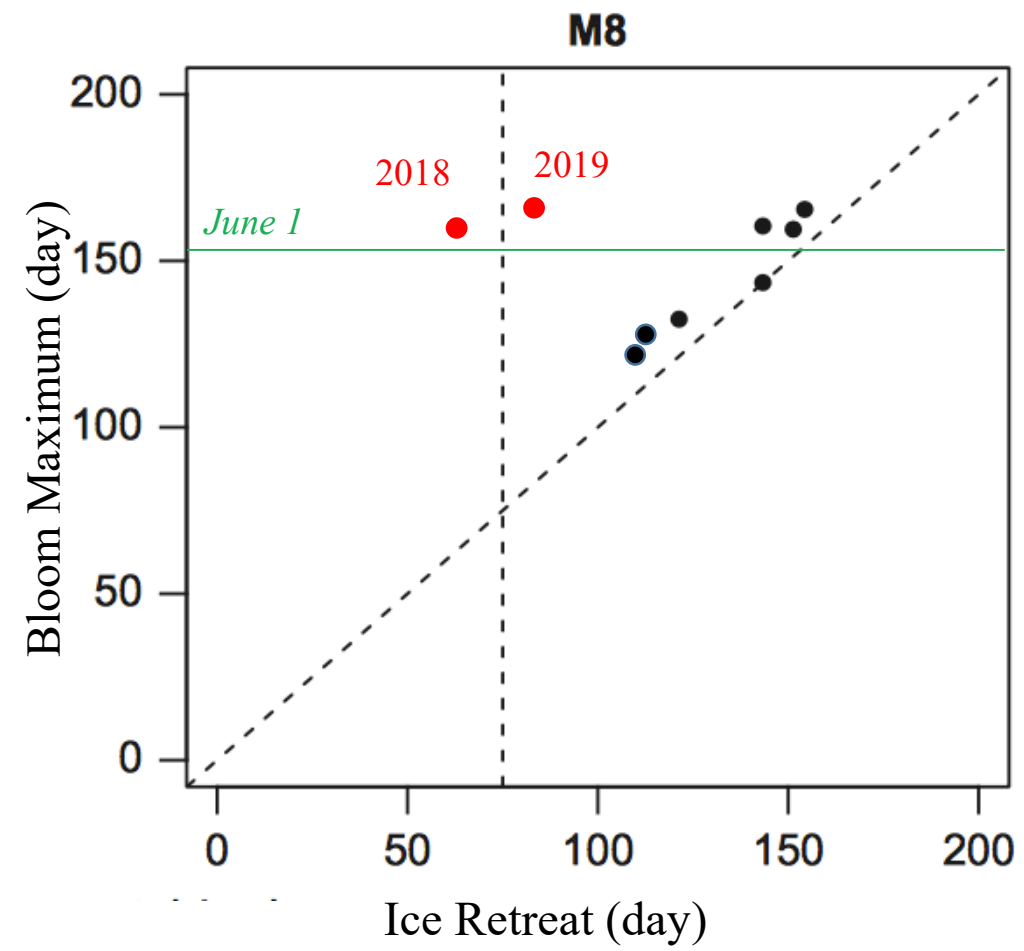
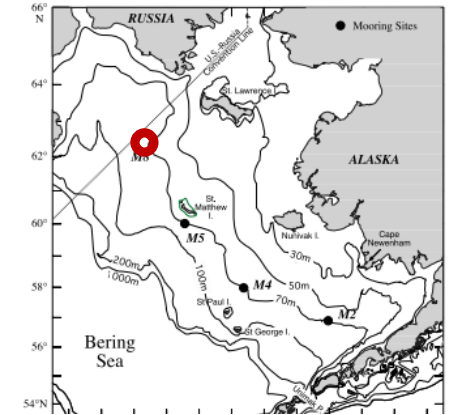




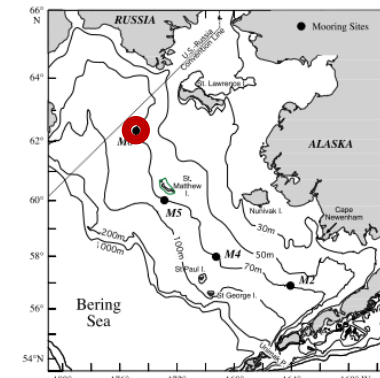
**What about
2019 – 2020?**



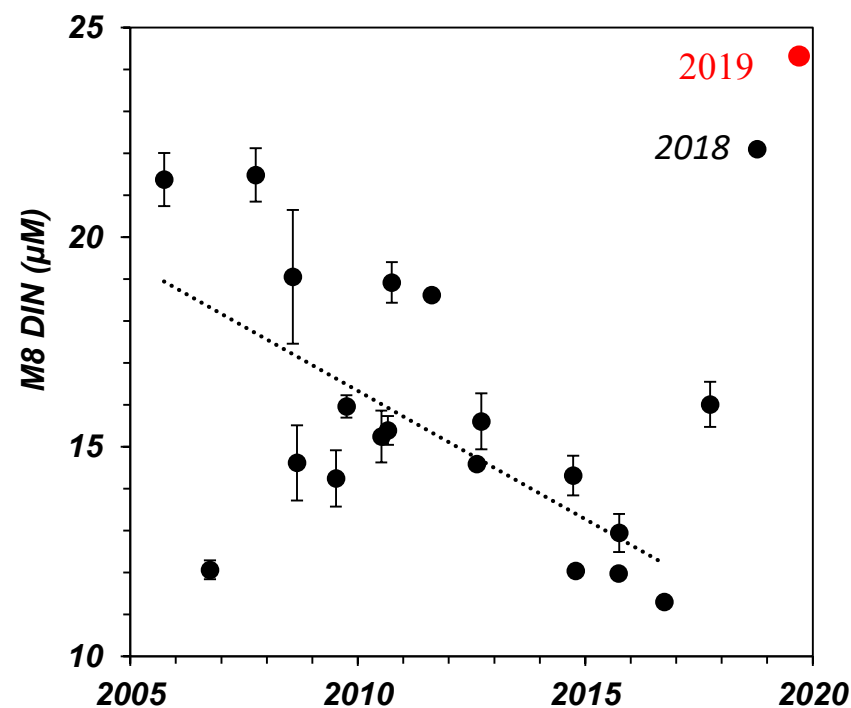
Chlorophyll and the northern Bering Sea



Nutrients and the northern Bering Sea

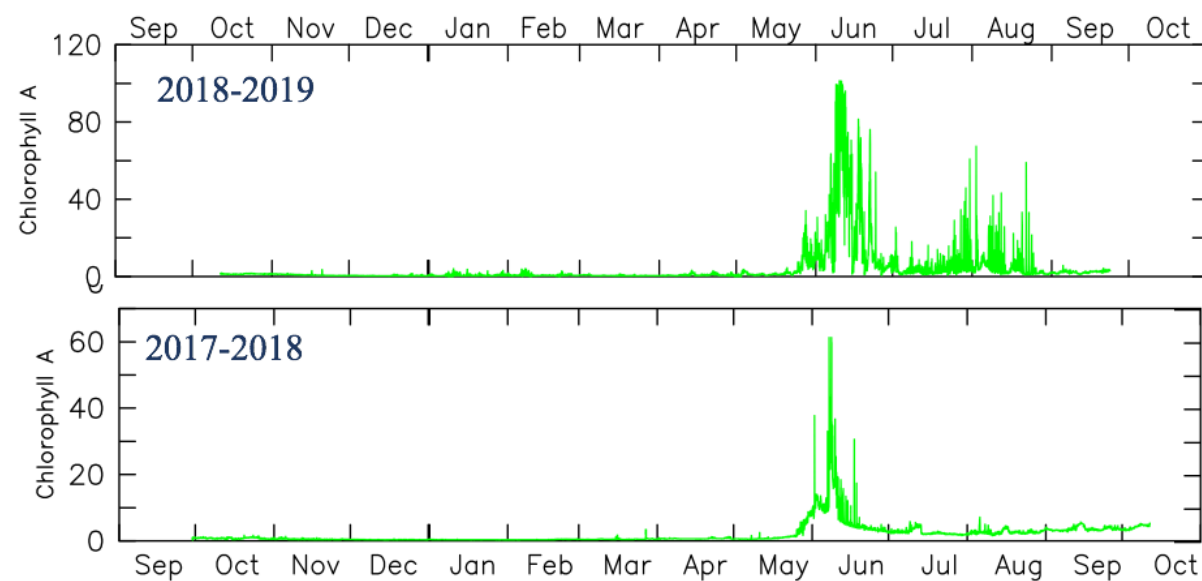


Bottom DIN

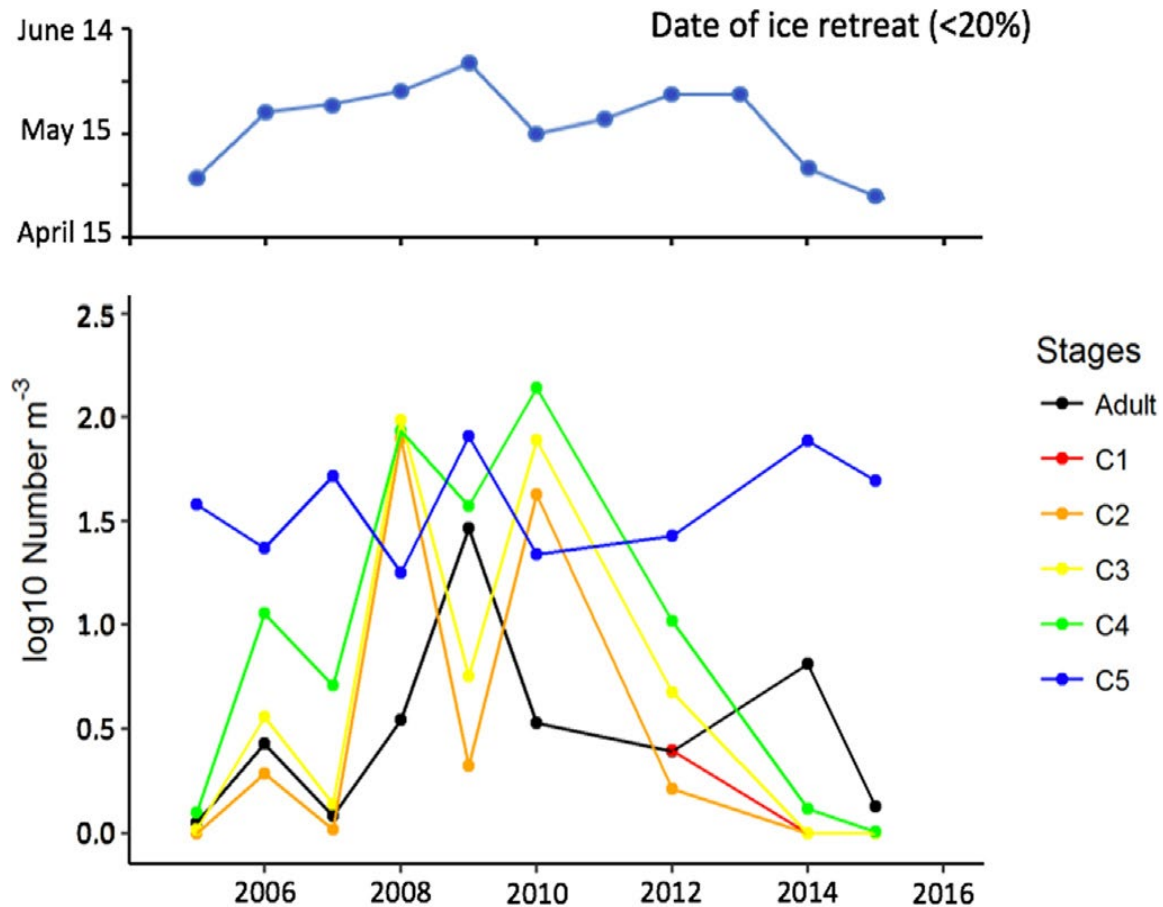


DIN = Dissolved Inorganic Nitrogen

Chlorophyll Fluorescence (22 m)



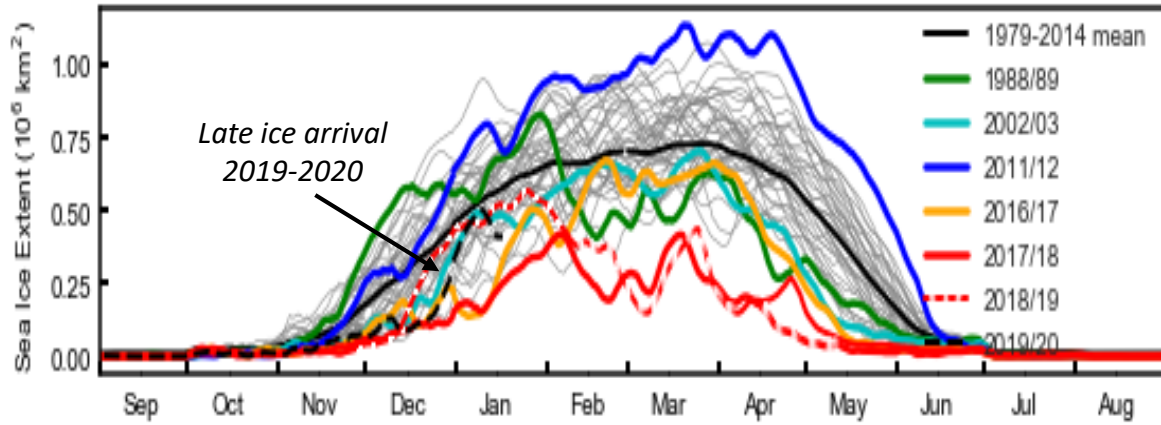
Copepods (*Calanus spp*) and the northern Bering Sea



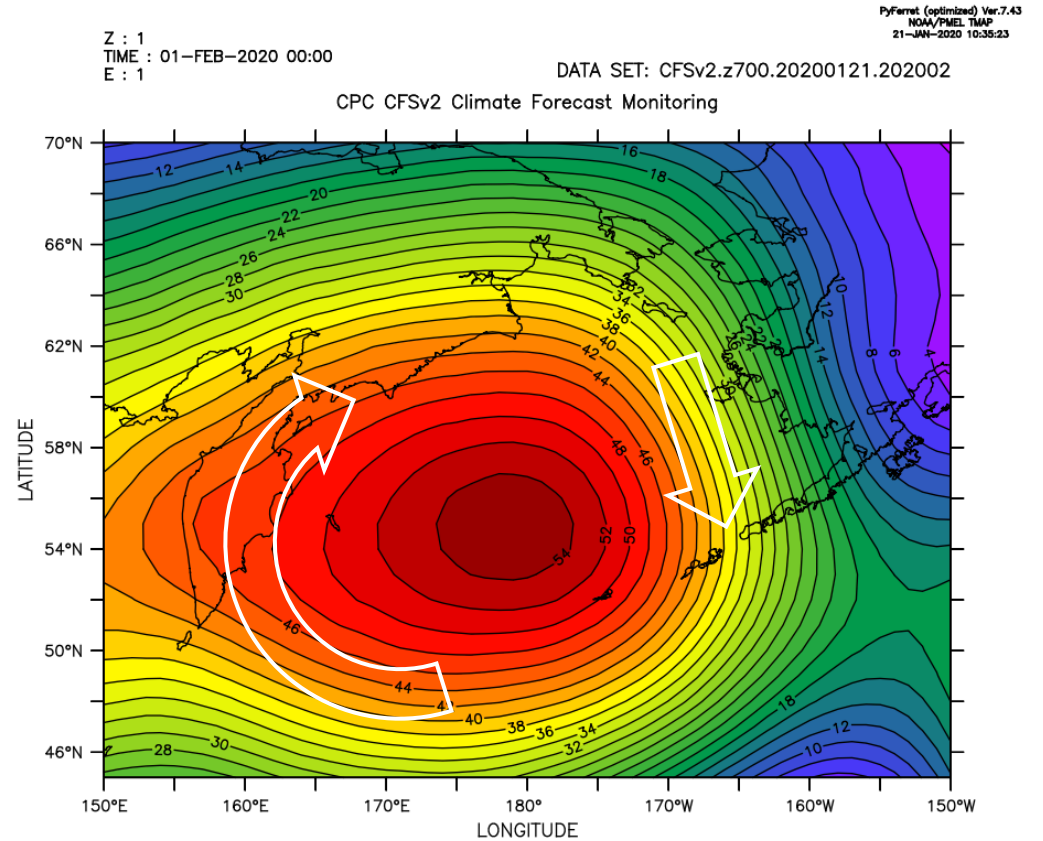
The day of ice retreat (areal ice concentration is <20%) in 50 km² box centered at M8 mooring. (b) Abundance (log₁₀ number m⁻³) of different stages of *Calanus* spp. at M8 (70-km² box). C1–C4 are early life-history stages.

Sea ice in the Eastern Bering Sea 2019-2020

Areal Ice extent on eastern Bering Sea



700 mb height anomaly



NCEP CFSv2 forecast monthly anomaly (gpm)

