



UNIVERSITETET I
NORDLAND

Manetene kommer! Kronemanet i norske fjorder

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HELGELAND
ARBEIDERBLAD

7 Mai 2007



Planktonnett 410 – 0 m.
Vefsnfjorden 150408



Periphylla periphylla

(No: kronemanet)

Dypvannsform (1000 – 3000 m)

Global utbredelse (men lav tetthet)

Direkte utvikling (ikke polyppstadium)

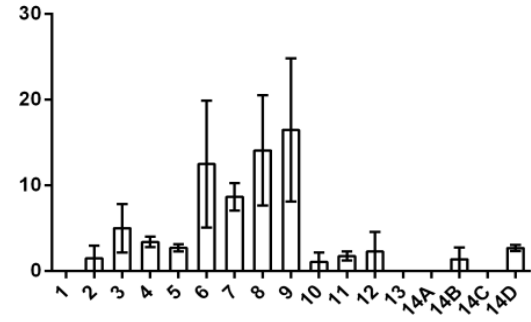




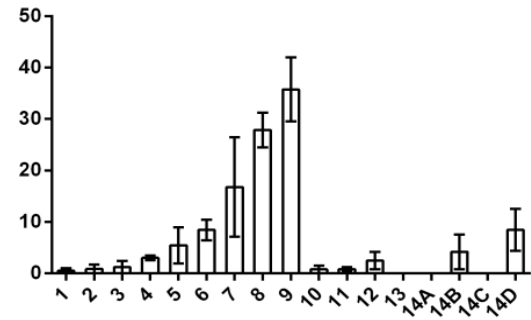
Foto: I Kvaal,D2

Periphylla periphylla ind m^{-2}

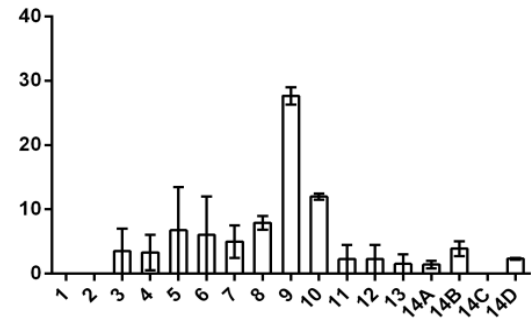
November 18 2010

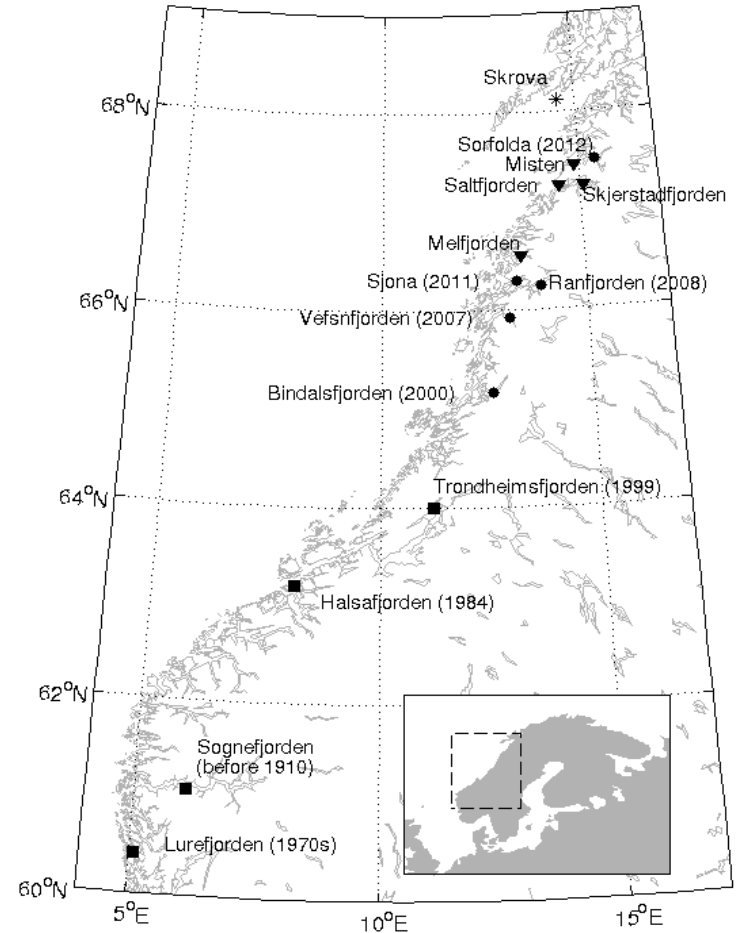


February 15 2011



May 3 2011





Bozman et al. (*in prepp*)



Jellyfish in the News Jellyfish shut-down Scottish nuclear power plant

Operations of the Torness nuclear power plant in Scotland were temporarily shut-down earlier this week when the seawater intake filters became clogged with jellyfish, according to British media sources (see links below). The jellyfish responsible was likely *Aurelia* sp.

While this type of impact by jellyfish on power plants has occurred before on a number of occasions, in China and Japan particularly, this is the first report

of jellyfish forcing a shut-down in the United Kingdom.

The Torness nuclear power plant has two Advanced Gas Cool Reactors, but it can also intake seawater to as a back-up safety system. Plant managers expect the reactors to be down for at least a week until the jellyfish can be cleared from the intake screens.

Images: (Top) Torness nuclear power plant (East Lothian, Scotland, UK). (Bottom) Aurelia sp.



Online Media Sources

<http://www.dailymail.co.uk/news/article-2009771/Jellyfish-force-shutdown-nuclear-power-station-swimming-filters.html?ITO=1490>

<http://www.reuters.com/article/2011/06/29/us-britain-nuclear-jellyfish-idUSTRE75S56D20110629>

<http://www.bbc.co.uk/news/uk-scotland-edinburgh-east-fife-13971005>

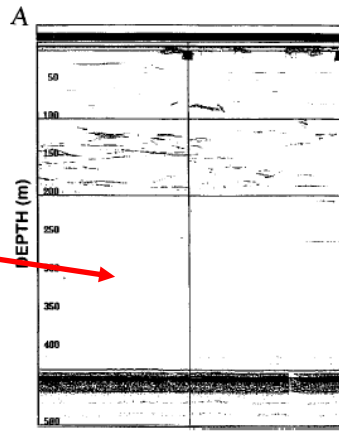
Lurefjorden, Hordaland (tidlig 90-tall)



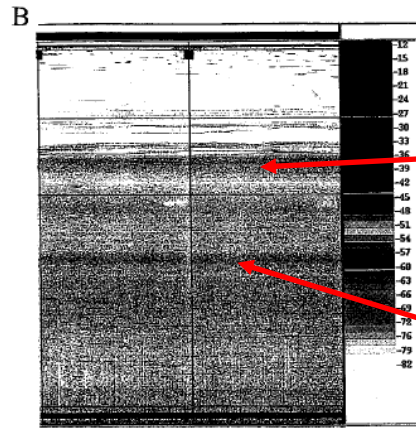
Fosså (1992)



Lurefjorden



Sørfjorden



Maurolicus muelleri

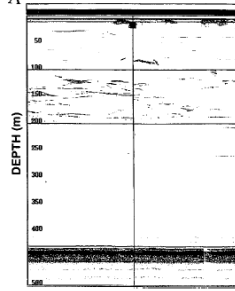


Benthosema glaciale

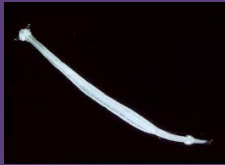
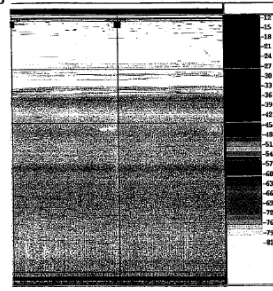
Lurefjorden

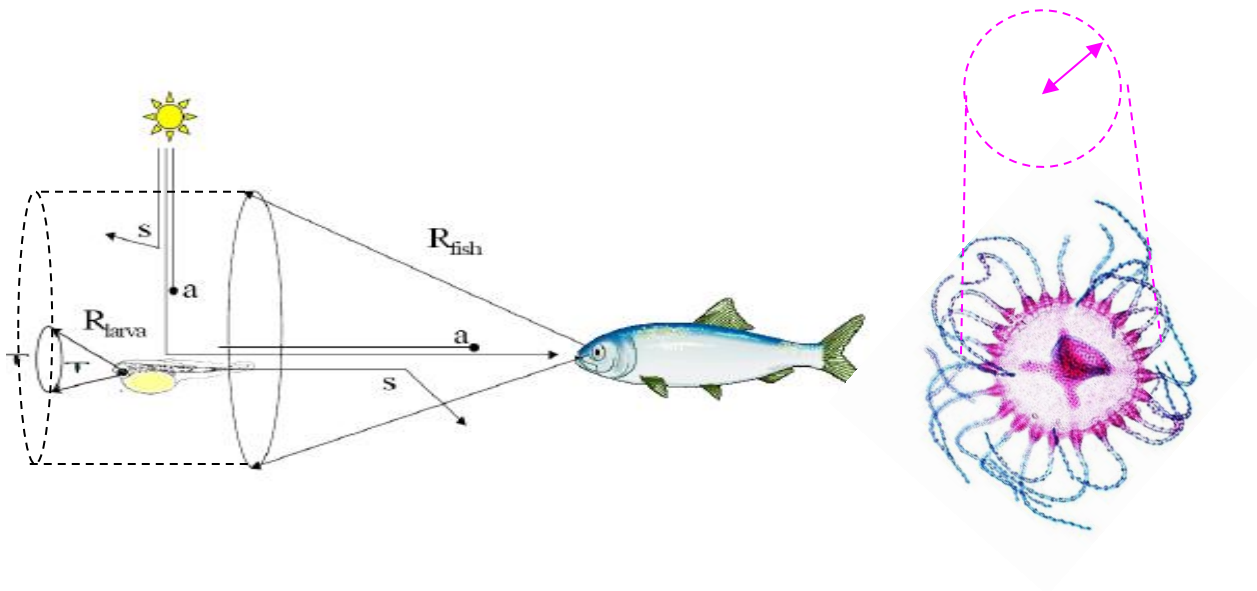
Sørfjorden

A



B





Betydning for konkurranseforhold

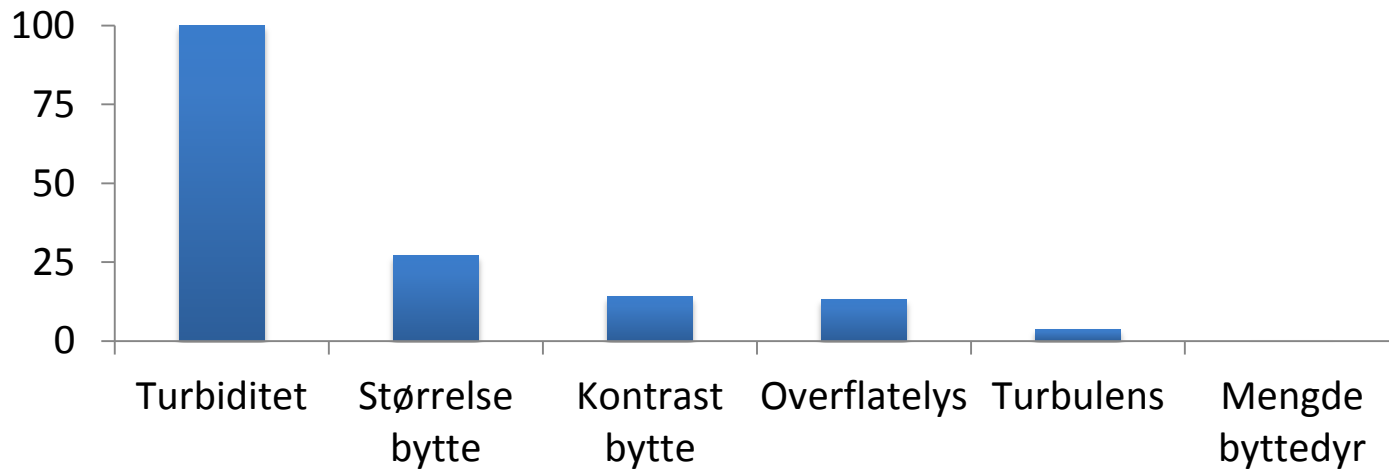
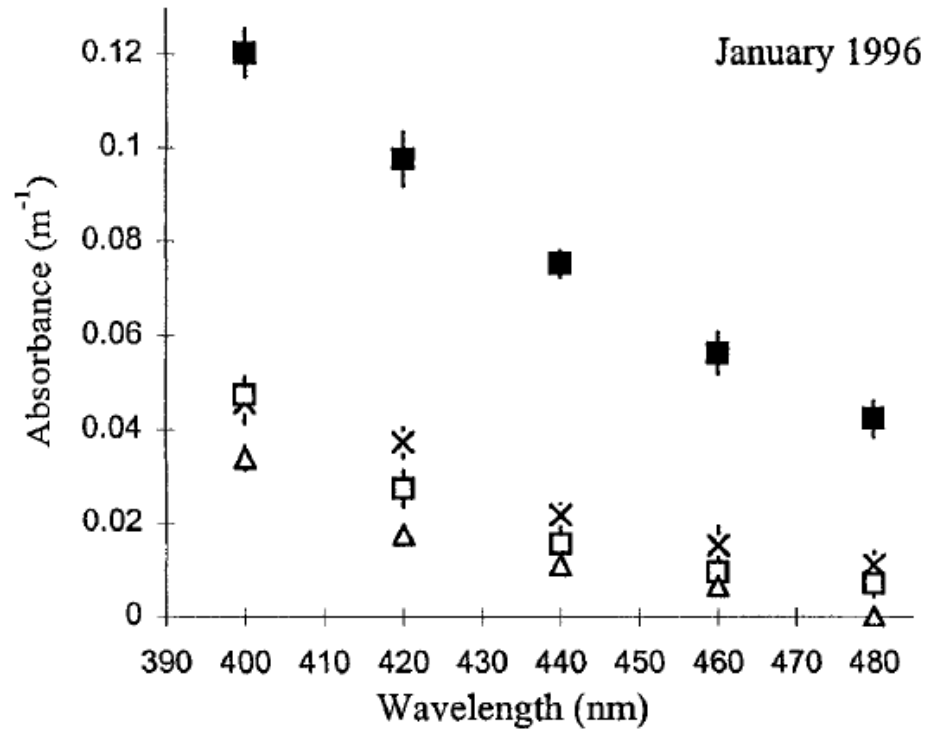
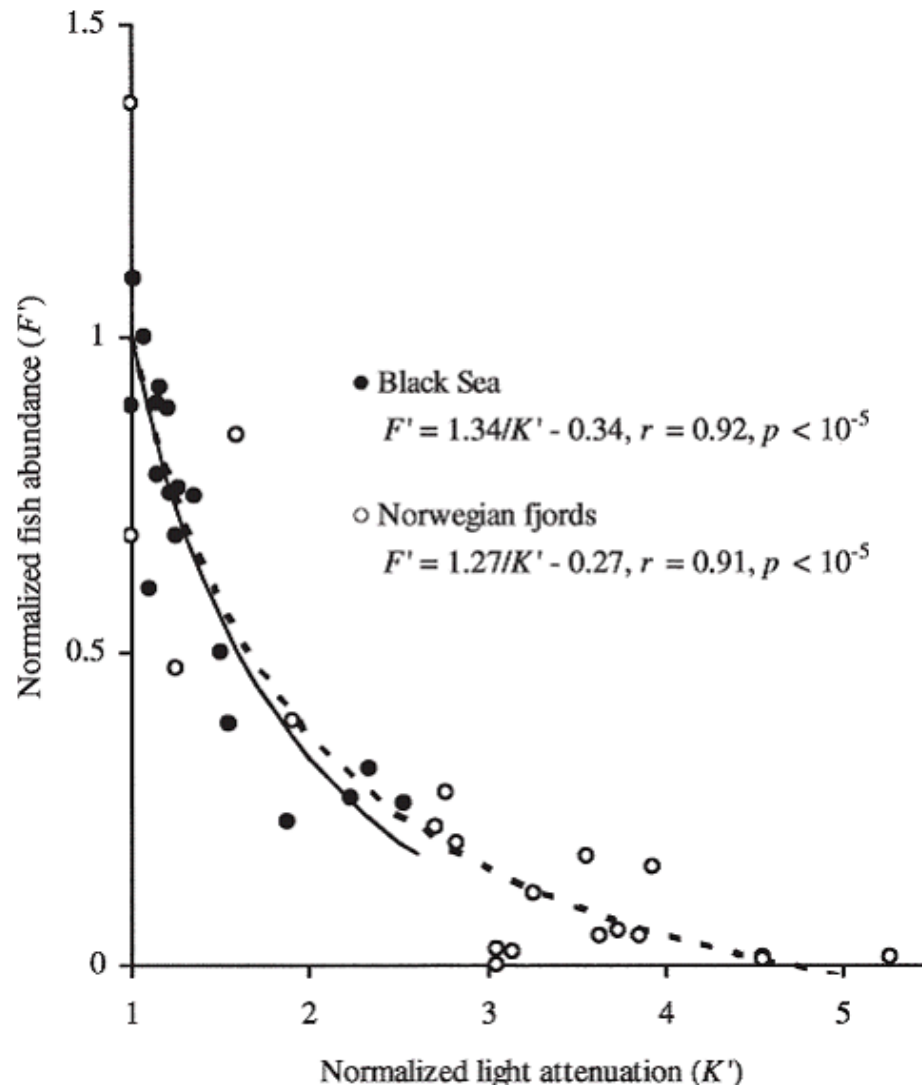




Foto: I Kvaal,D2

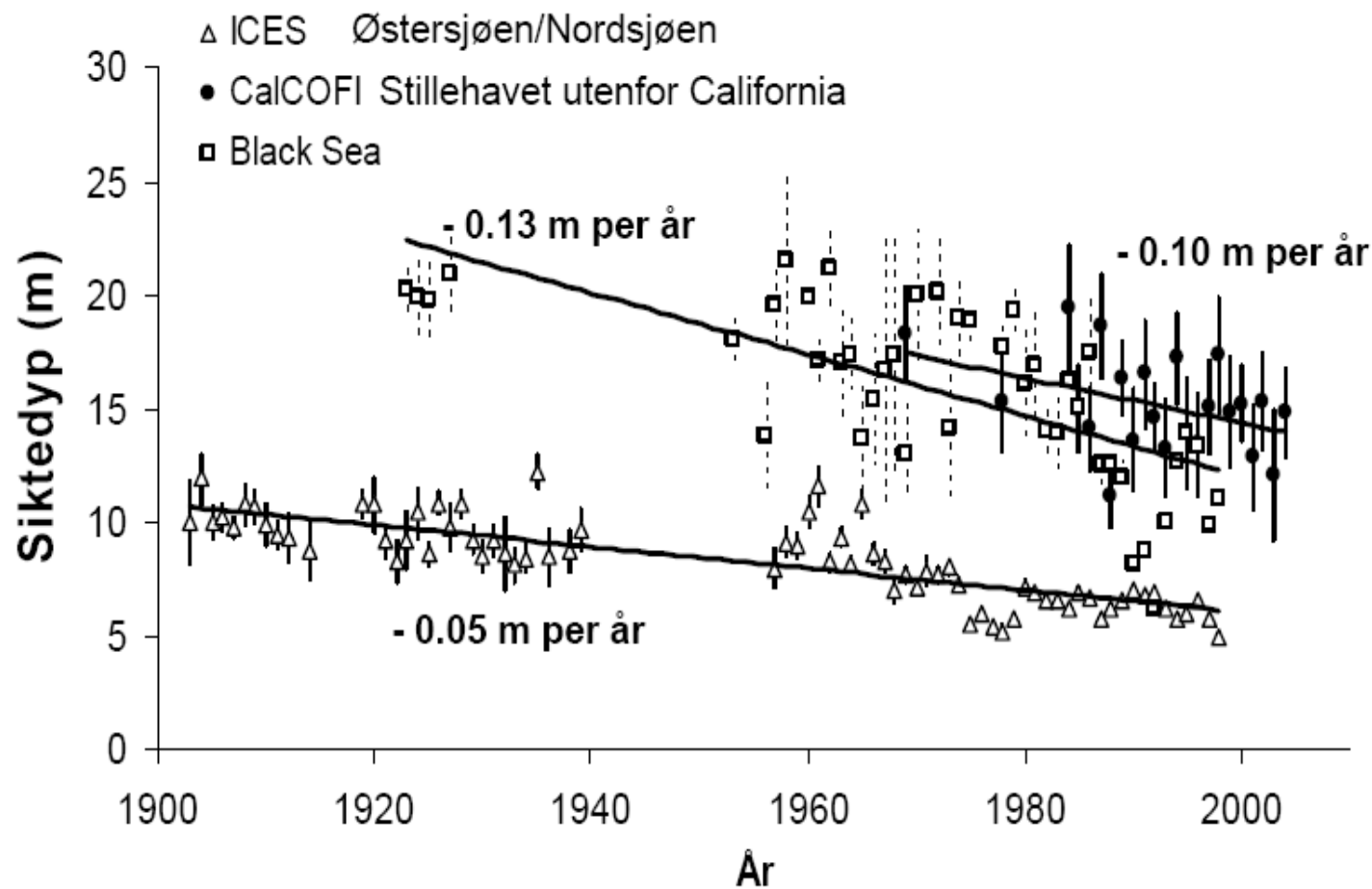


Forholdet mellom lyssvekking og fiskemengde



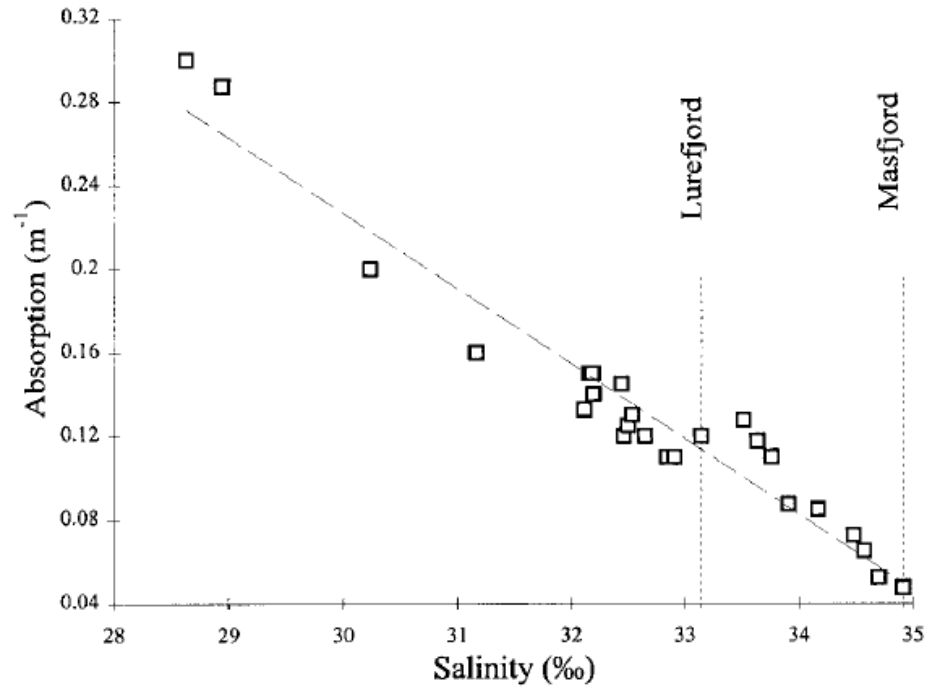
DL Aksnes, UiB

Endringer i lyssvekking i kystvann

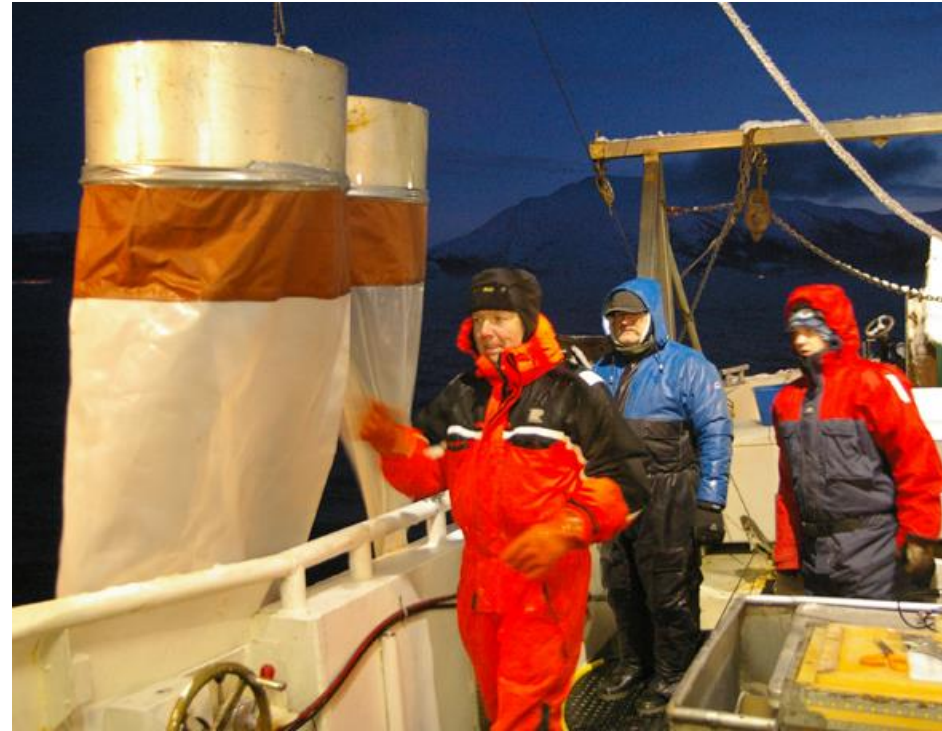


DL Aksnes, UiB

Salinitet og lyssvekking

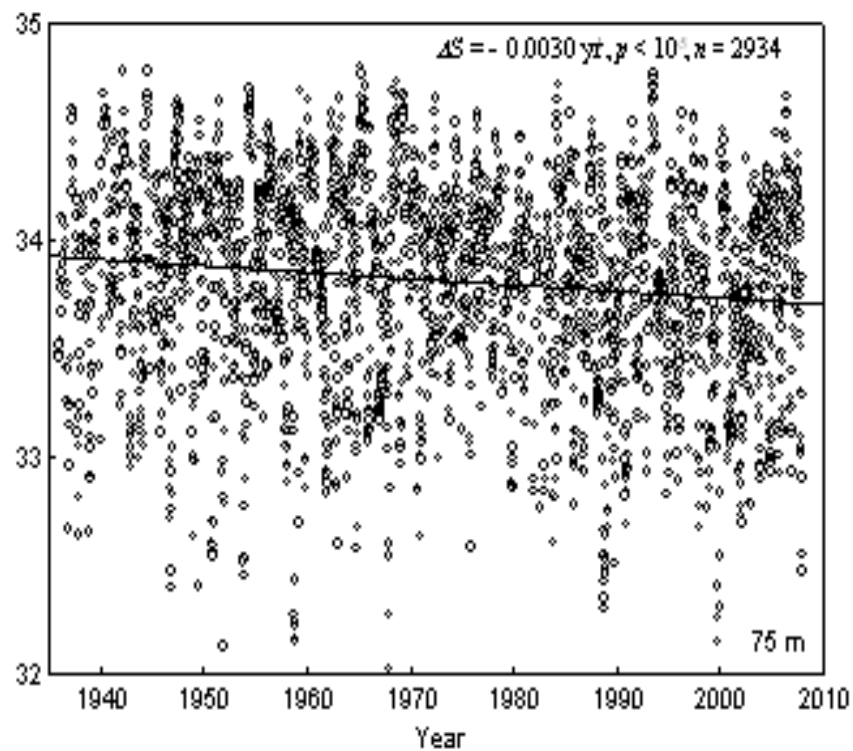
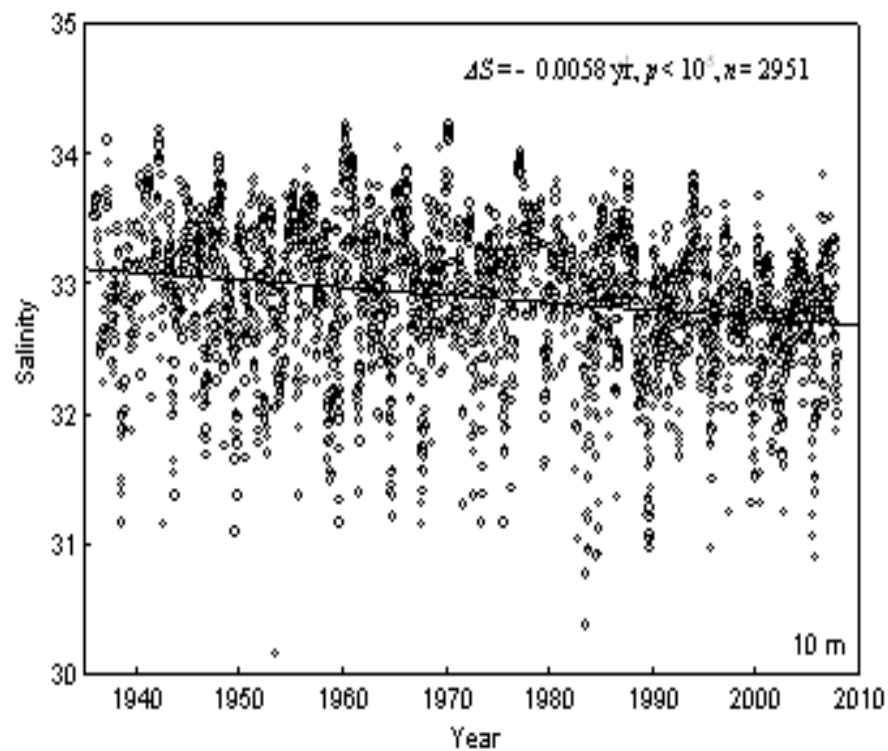


Eiane et al. 1999



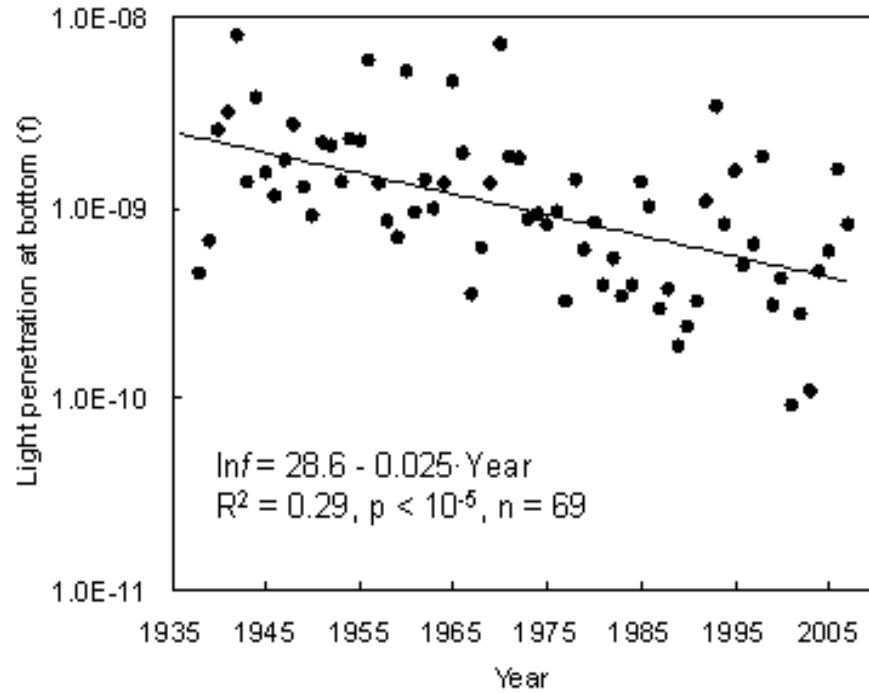
Endringer i salinitet i kyststrømmen

Skrova - data fra Havforskningsinstituttet i Bergen

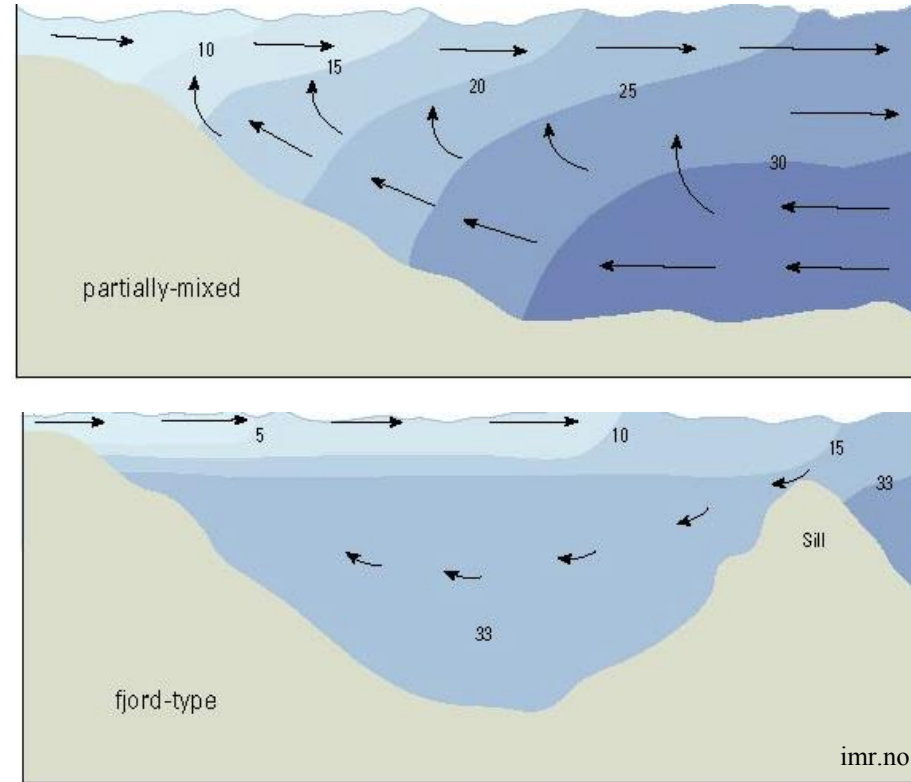


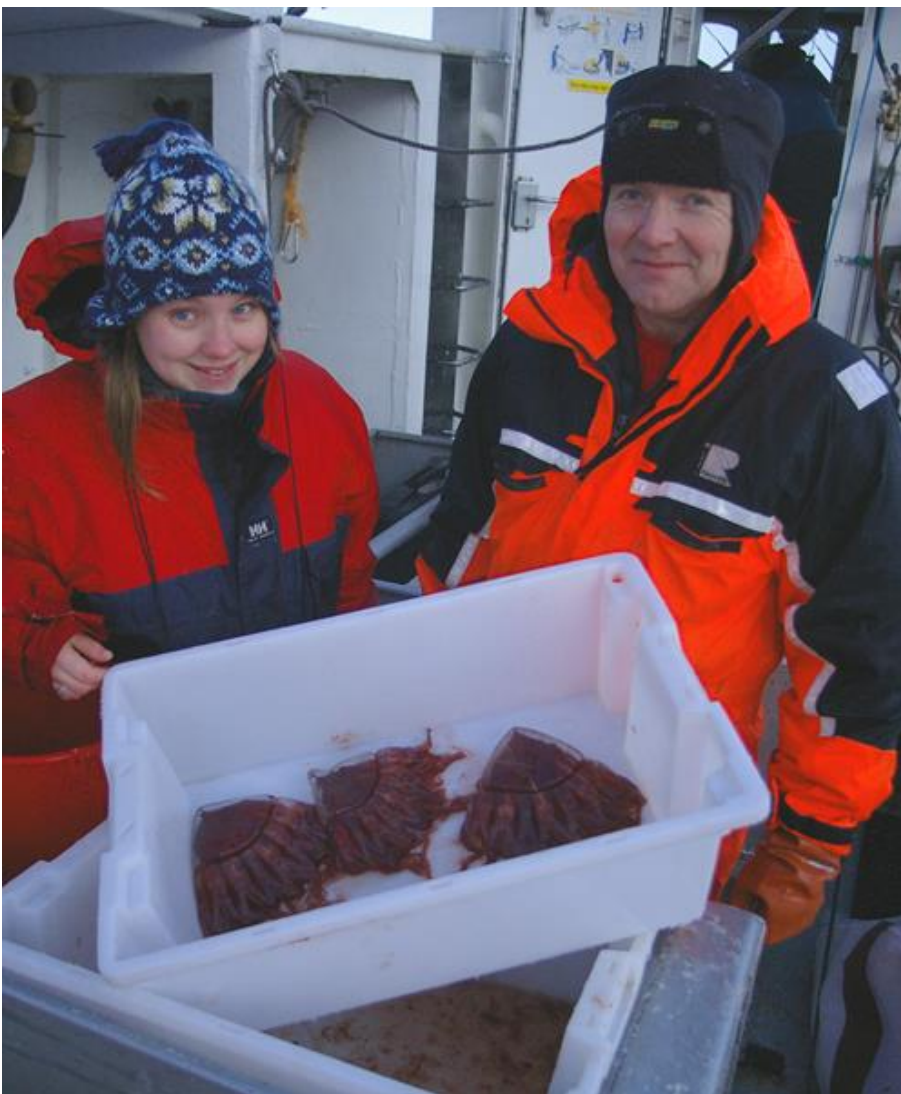
Bozman et al. (in prepp)

Beregnet lysnivå i Vefsnfjorden



Bozman et al. (in prepp)





Siden 1970 tallet har *Periphylla* etablert massive populasjoner i fjorder fra Hordaland til Nordland.

Vi tror at en av årsakene er endringer i kystvannets (optiske) egenskaper som først gjør seg gjeldende i terskelfjorder som i liten grad påvirkes av Atlantiske vannmasser.

Økologisk ser det ut som om endringen innebærer en overgang fra et fiskedominert system til et manetsystem.

Periphylla er en viktig indikator på at slike økologiske endringer har funnet sted.

Takk for oppmerksomheten!