

Sjór og svifþörungar í Breiðafirði

Erla Björk Örnólfsdóttir¹, Sólveig Ólafsdóttir² og Agnes Eydal²

¹Vör Sjávarrannsóknarsetur við Breiðafjörð, ²Hafrannsóknarstofnunin

erla@javarrannsoknir.is



Hvati verkefnis

- Breiðafjörður lífauðugur fjörður
- Frumframleiðni er undirstaða lífauðgi
- Samantekt á rannsóknum í Breiðafirði fram til ársins 1997 benti á að eyður væru í þekkingu á svifvist fjarðarins (Halldóra Skarphéðinsdóttir og Karl Gunnarsson, 1997)

Markmið

Markmið rannsóknar á svifþörungum og umhverfispáttum í Breiðafirði eru að kanna:

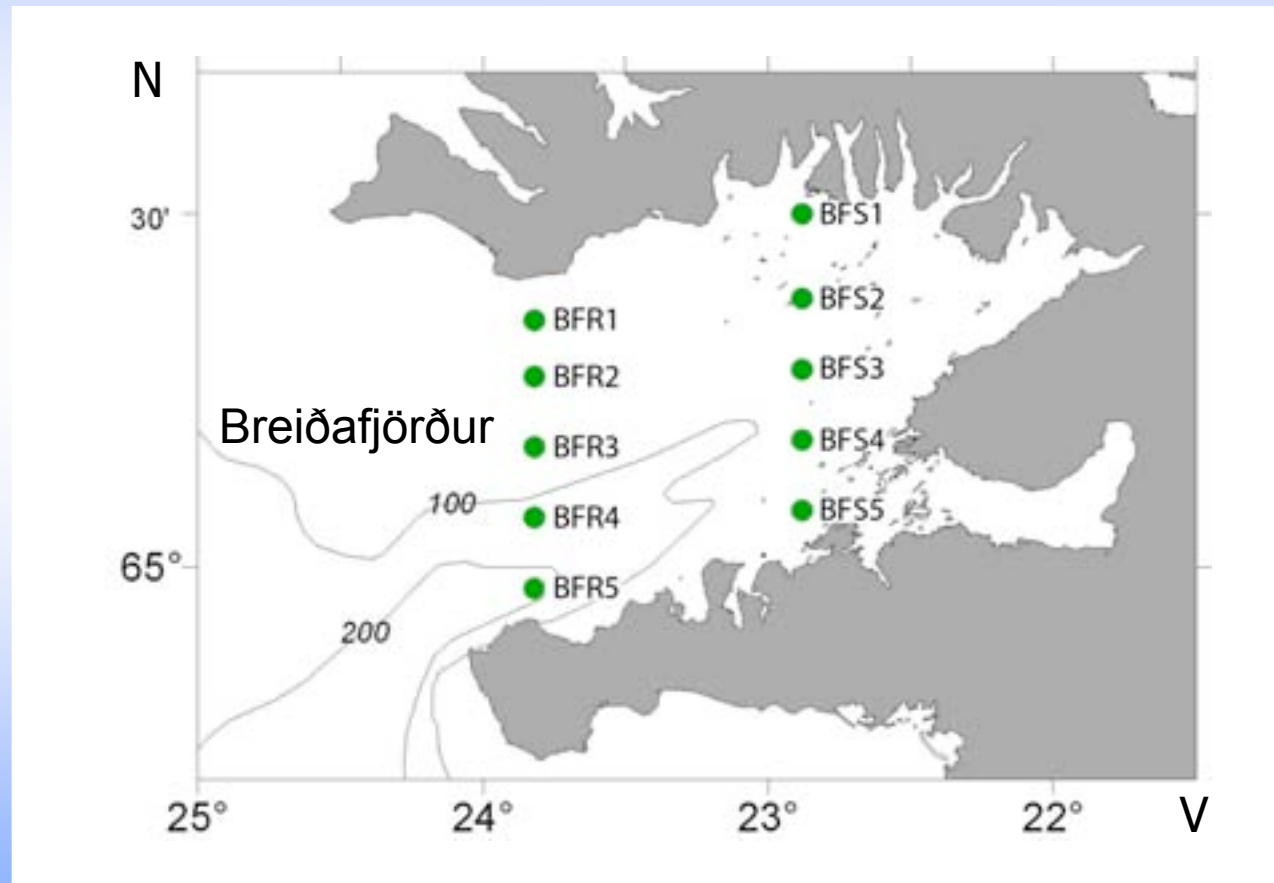
- magn svifþörunga í tíma og rúmi
- framvindu þörungasamfélaga
- tengsl svifþörunga og styrks helstu næringarefna, (köfnunarefni, fosfór og kísill)
- árstíðaferla eðlispátta (sjávarhita, seltu, súrefnis) og styrks helstu næringarefna á völdum stöðum í firðinum

Umfang og staðhættir



Sýnataka

- Tvö snið:
- 10 stöðvar
- 20x á ári
- Þörungar
- Næringarefni
- Eðlisþættir



Sýnataka

Dýpi sýnatöku og söfnun:

- 1 m þörungar, næringarefni
- 5 m þörungar
- 10 m þörungar, næringarefni
- 20 m þörungar
- 30 m næringarefni
- 50 m næringarefni
- 100m næringarefni
- botn næringarefni

Yfirborð til botns:

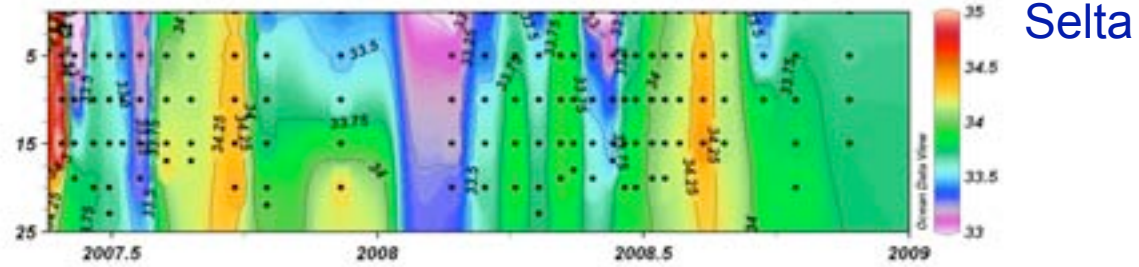
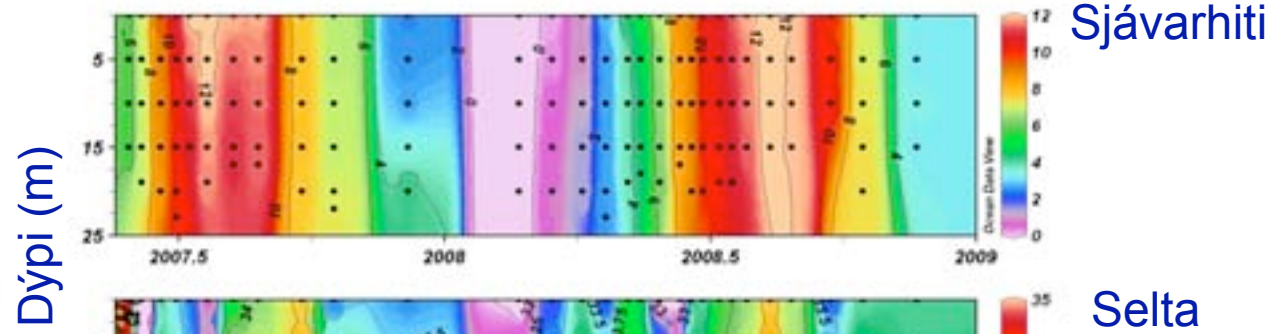
- Selta, hiti, súrefnisstyrkur, sýrustig (pH)



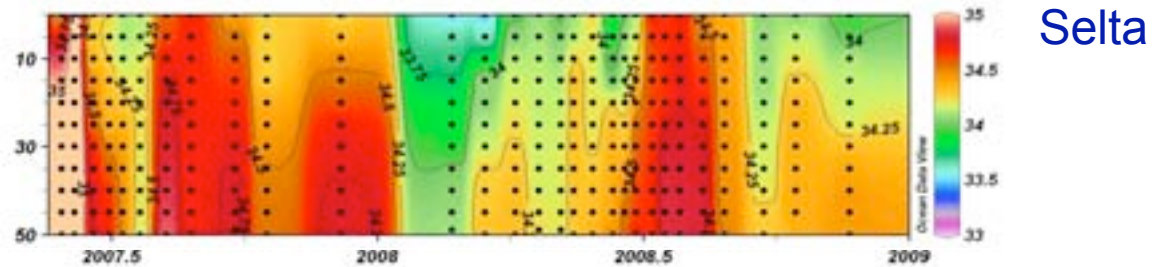
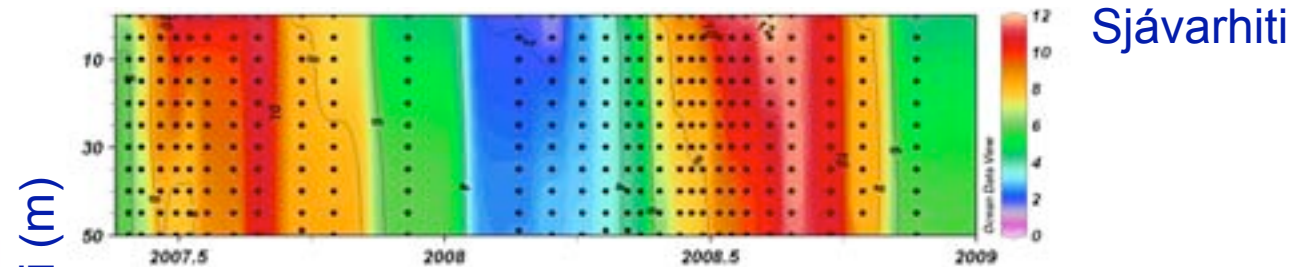
Eðlisþættir á BFS



BFS1



BFS4

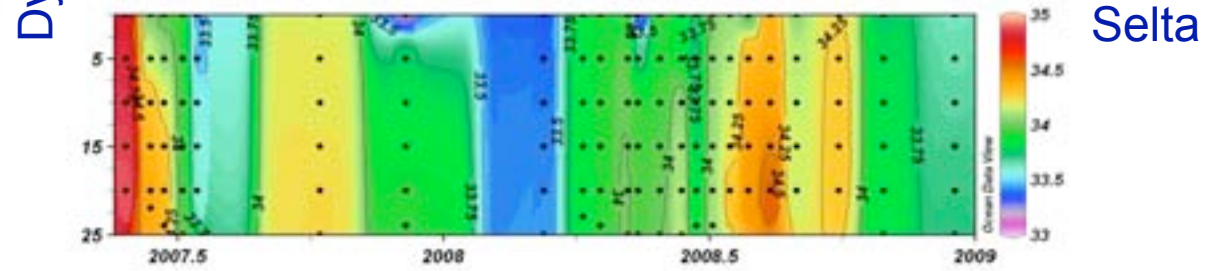
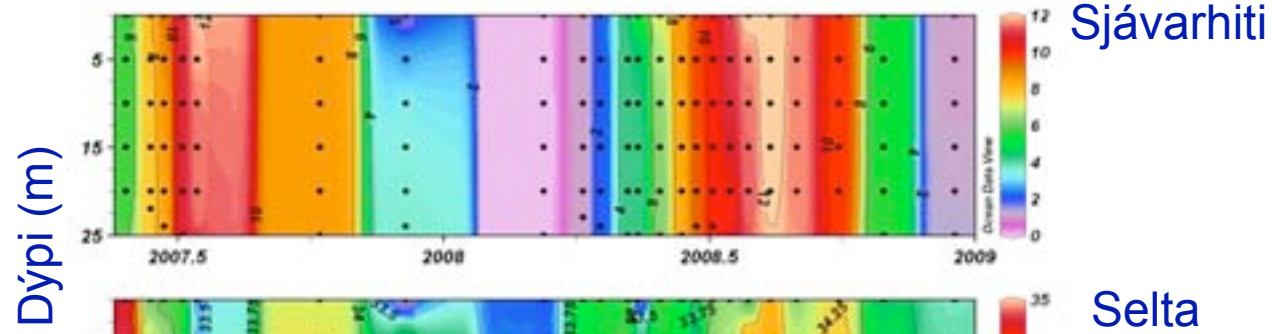


Tími (ár)

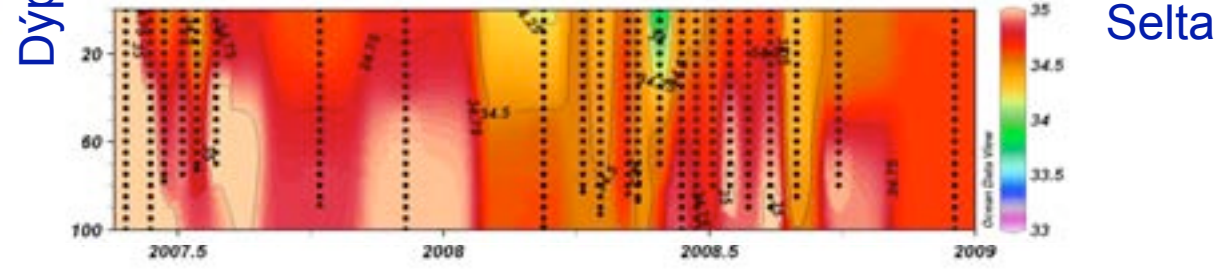
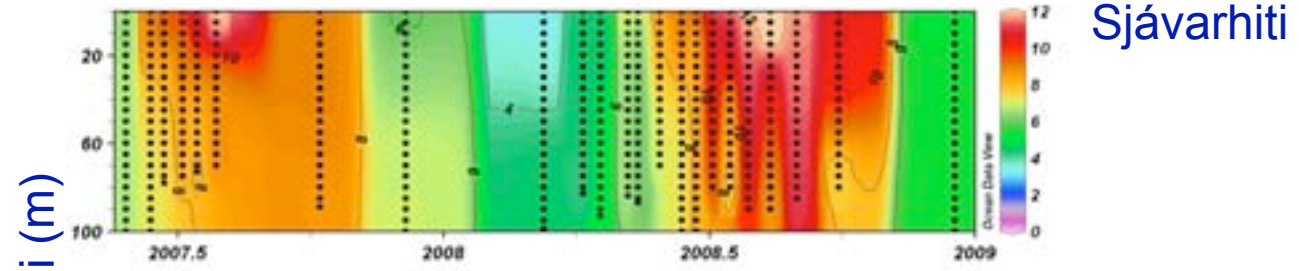
Eðlisþættir á BFR



BFR1

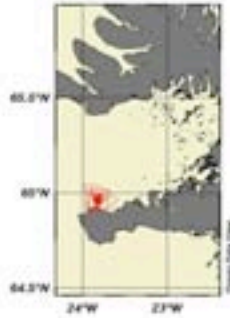


BFR5



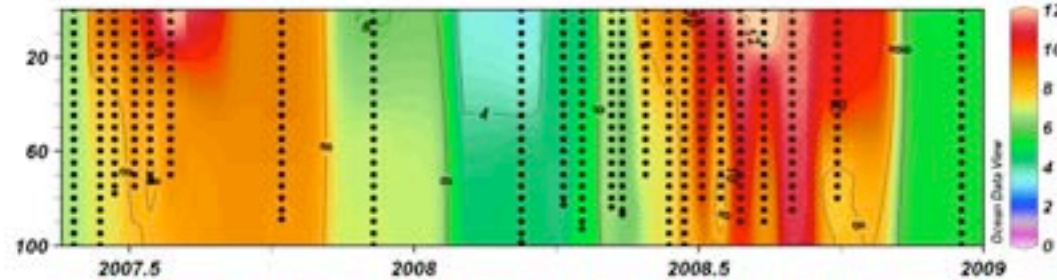
Tími (ár)

Eðlisþættir og styrkur næringarefna

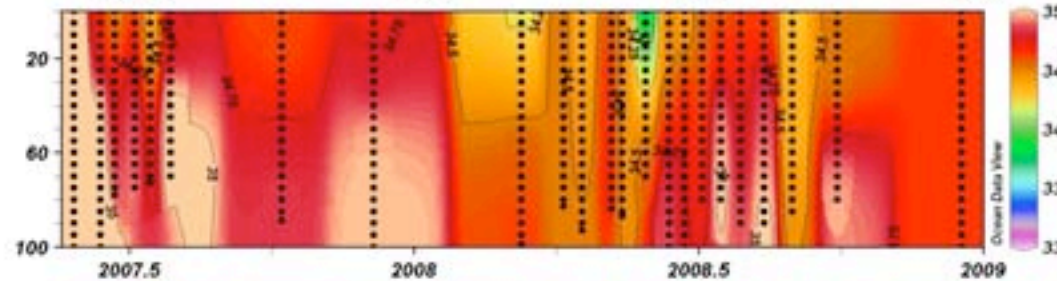


BFR5

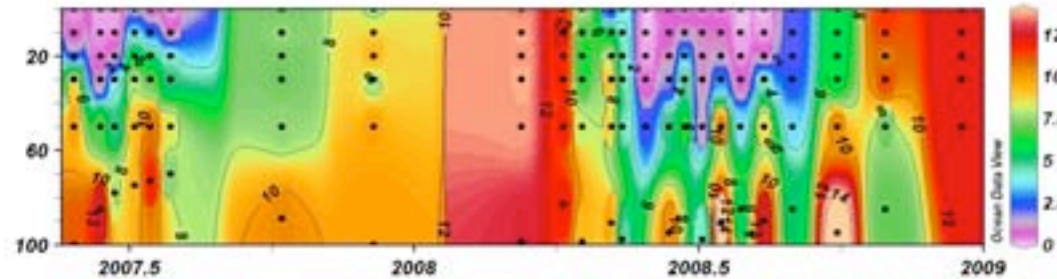
Dýpi (m)



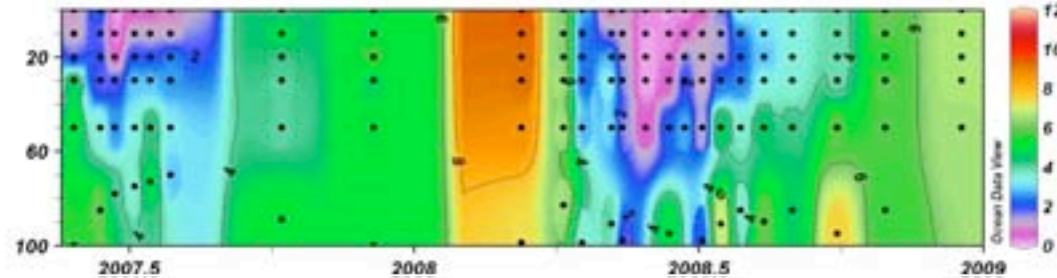
Sjávarhiti (°C)



Selta (ppt)



Köfnunarefni (μmol L⁻¹)



Kísill (μmol L⁻¹)

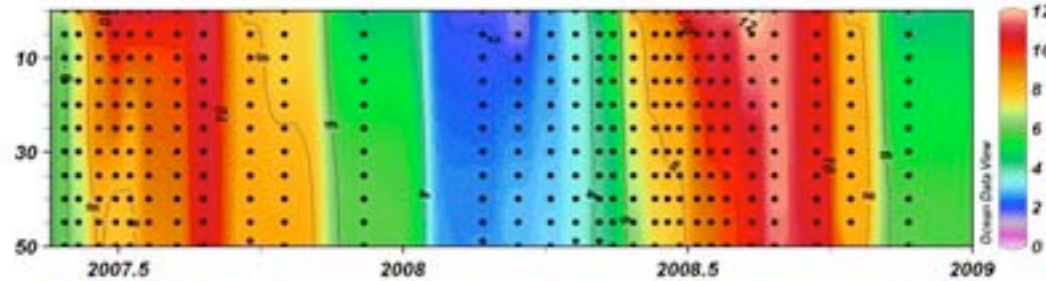
Tími (ár)

Eðlisþættir og styrkur næringarefna

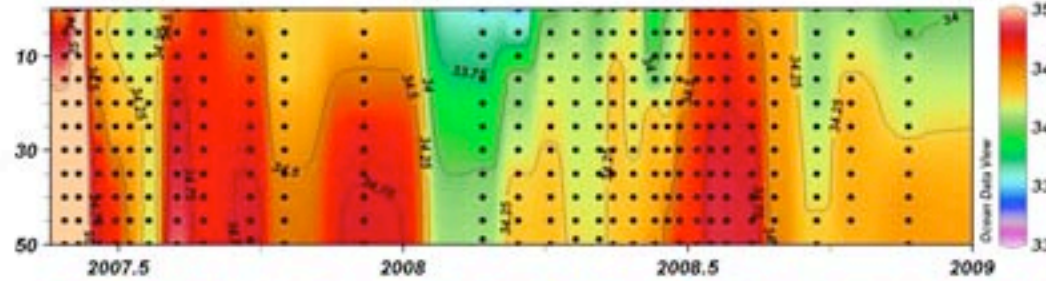


BFS4

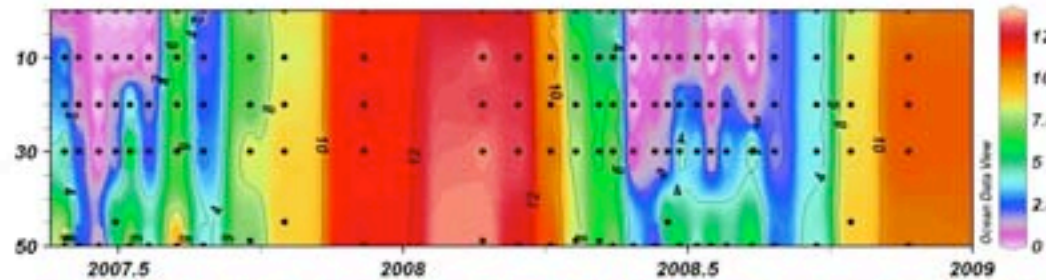
Dýpi (m)



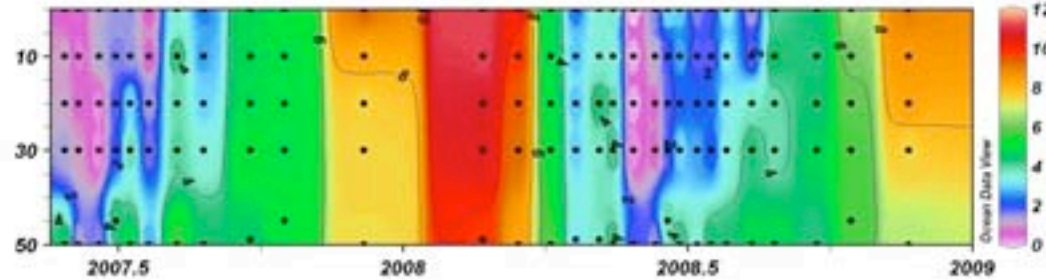
Sjávarhiti (°C)



Selta (ppt)



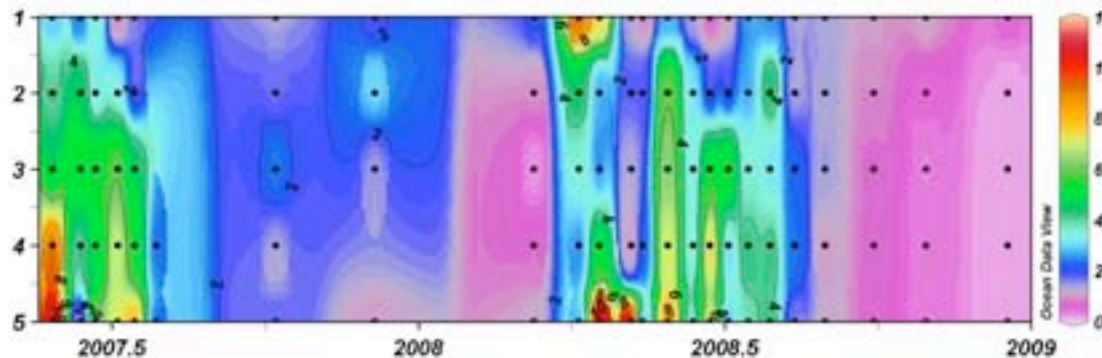
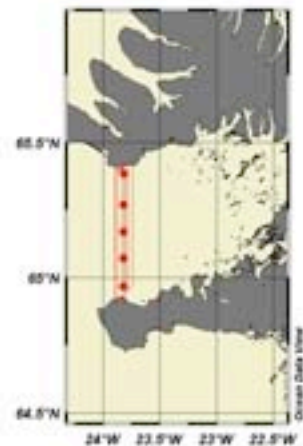
Köfnunarefni
($\mu\text{mól L}^{-1}$)



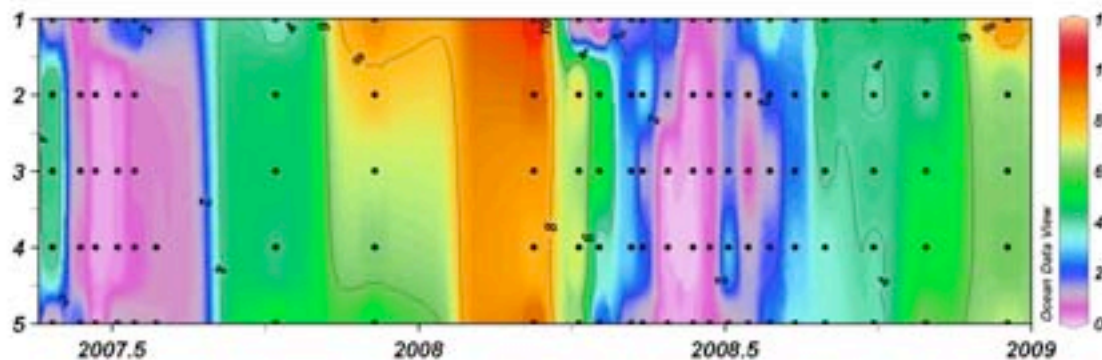
Kísill ($\mu\text{mól L}^{-1}$)

Tími (ár)

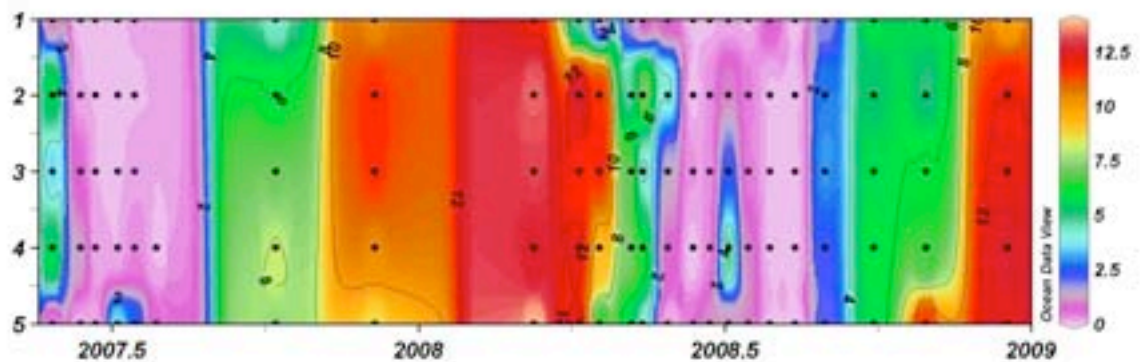
Mælingar á 10 m dýpi á sniði BFR



Blaðgræna *a*
($\mu\text{g L}^{-1}$)



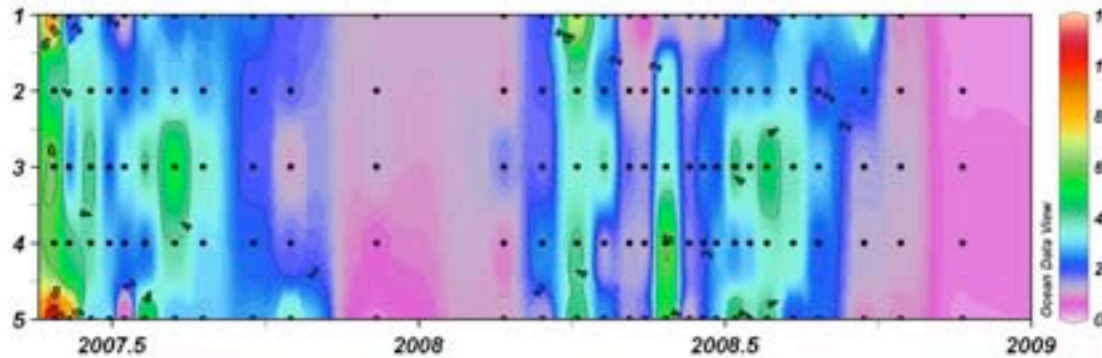
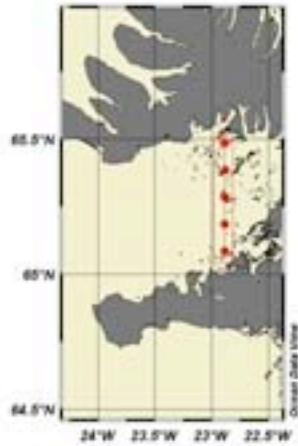
Kísill
($\mu\text{mol L}^{-1}$)



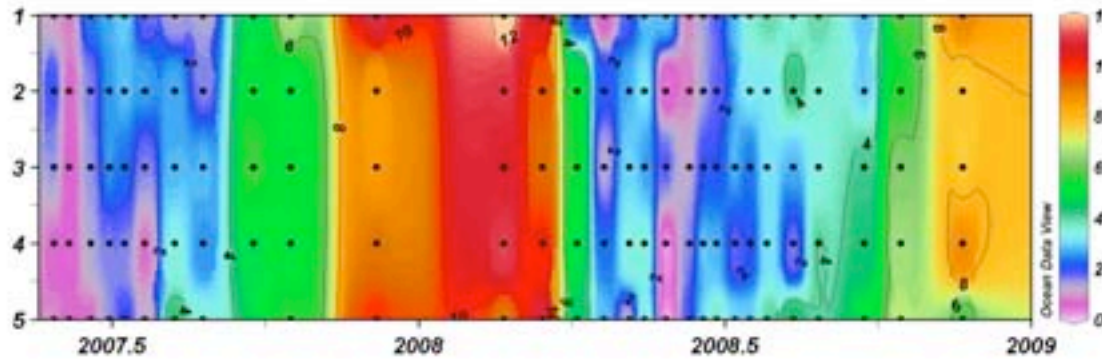
Köfnunarefni
($\mu\text{mol L}^{-1}$)

Tími (ár)

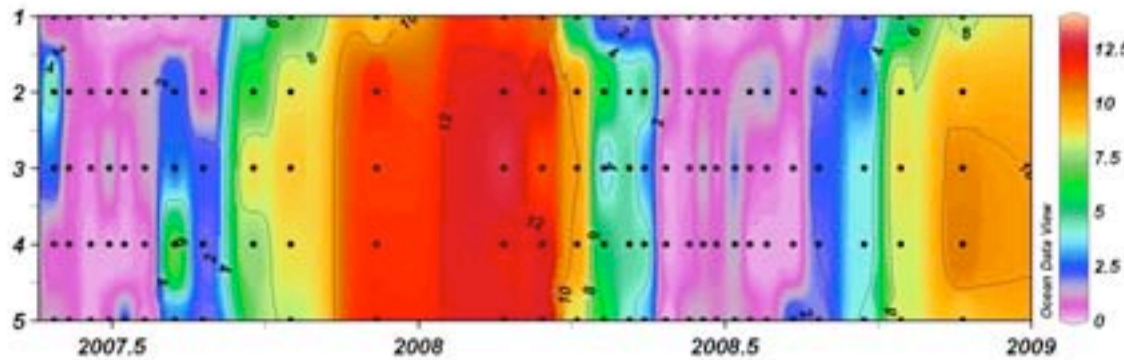
Mælingar á 10 m dýpi á sniði BFS



Blaðgræna a
($\mu\text{g L}^{-1}$)



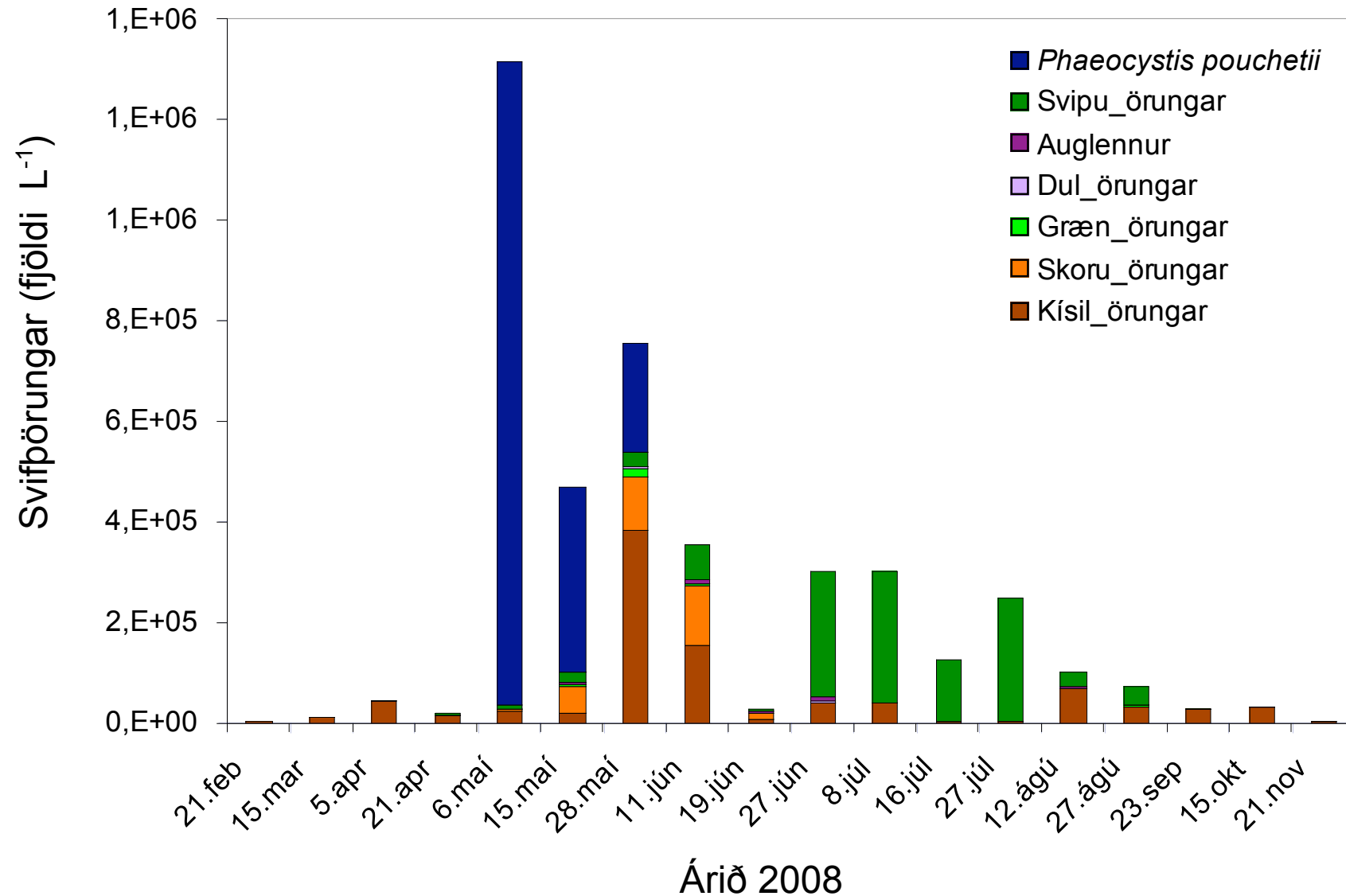
Kísill
($\mu\text{mol L}^{-1}$)



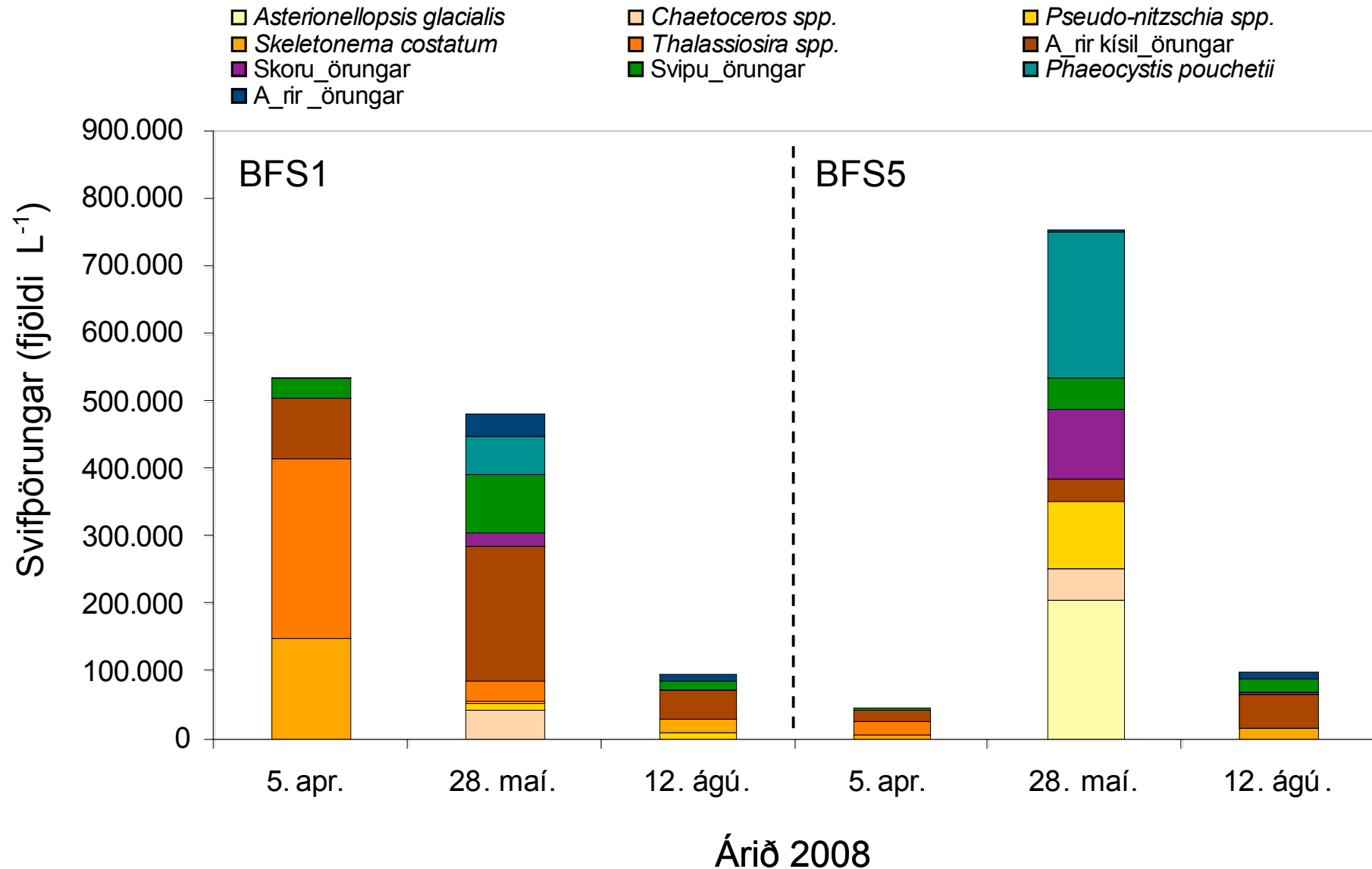
Köfnunarefni
($\mu\text{mol L}^{-1}$)

Tími (ár)

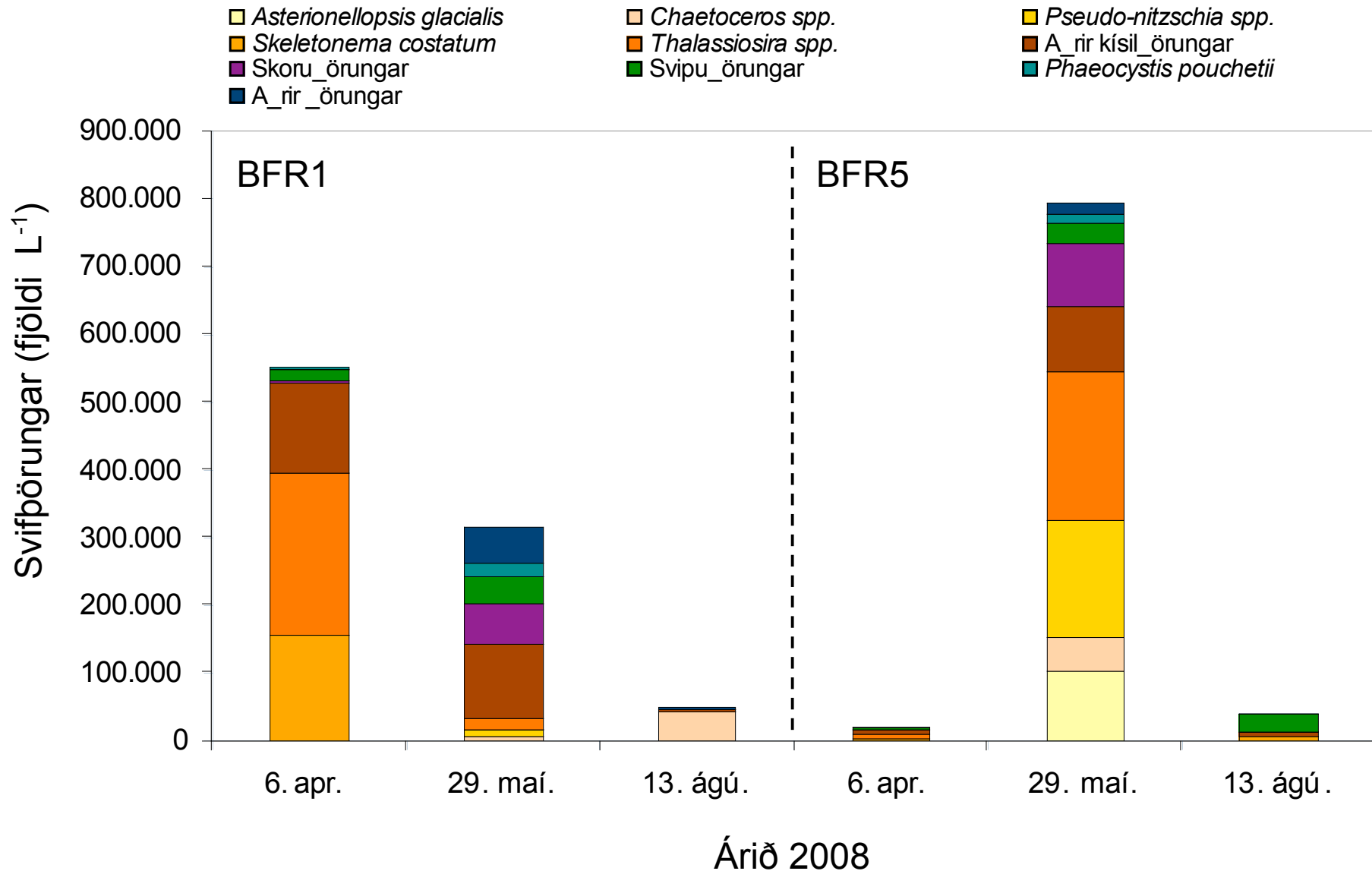
Þéttleiki svifþörungahópa á stöð BFS4



Þéttleiki svifþörungna nyrst og syðst á BFS




Þéttleiki svifþörungna nyrst og syðst á BFR



Samantekt

- Landræn áhrif greinilegri norðar en sunnar
- Ytra snið hafrænt og áhrif sjávarfalla merkjanleg
- Framvinda vorblóma frá norðri til suðurs
- Kísilpörungablómi og *P. pouchetii* áberandi



Þakkir: Gina S. Sapanta, Karen Olsen, Christina Stadler,
Magnea Magnúsdóttir, Stefán Á. Arngrímsson, Ásgeir
Valdimarsson, Örvar Marteinnsson, Símon Már Sturluson