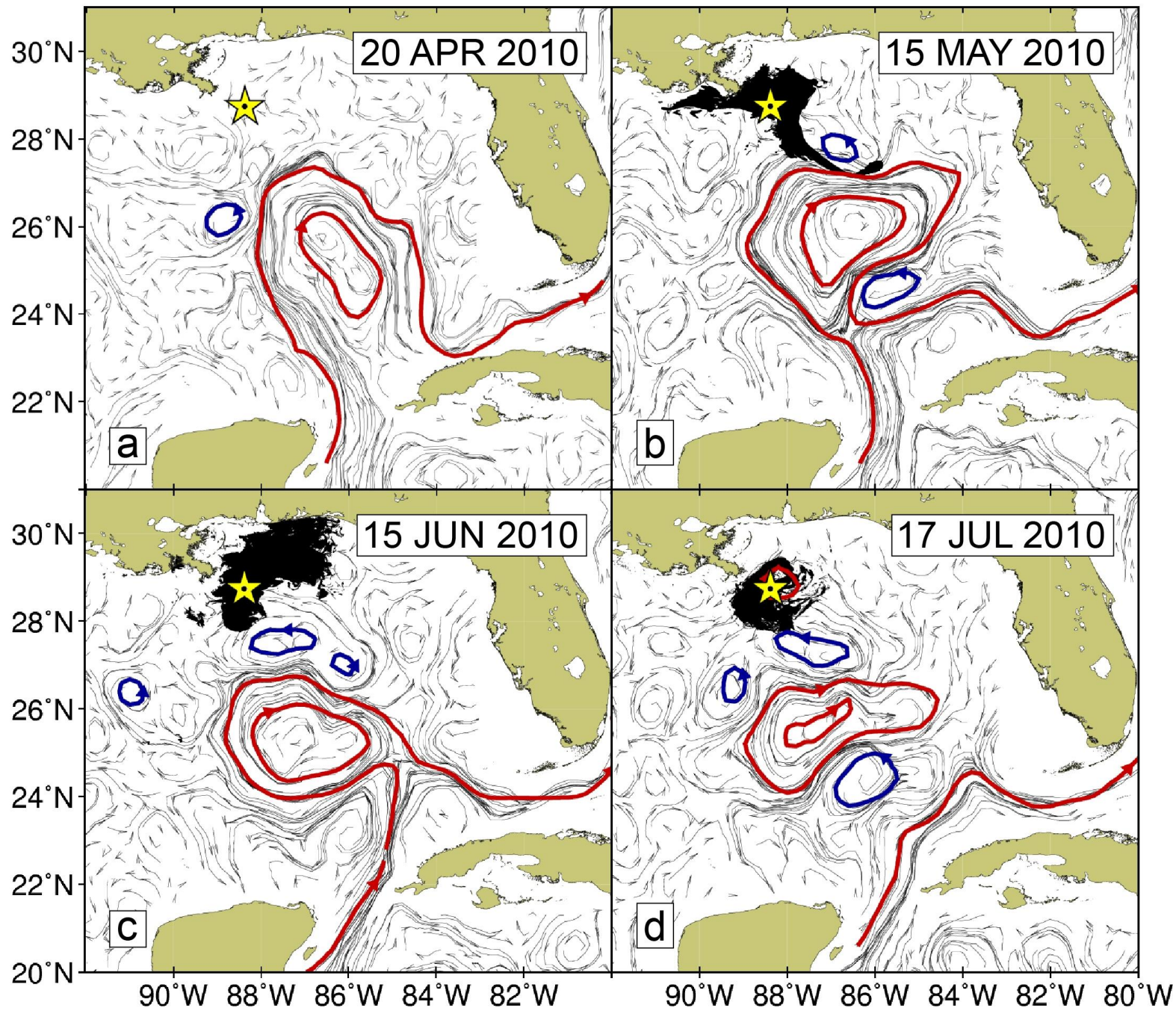


Fisheries Oceanography during the Deepwater Horizon Oil Spill

AOML – SEFSC Workshop
May 29, 2014

Ryan Smith
AOML/PhOD



AOML – SEFSC Interdisciplinary Oceanography

Deepwater Horizon Response

NOAA Ship *Nancy Foster*

June 30 – July 18, 2010

73 CTD/LADCP(57) casts (w/ O₂, chl_a, CDOM)

191 XBT deployments

24 surface drifter deployments

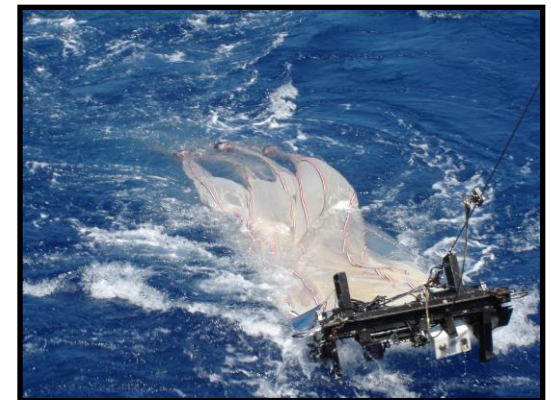
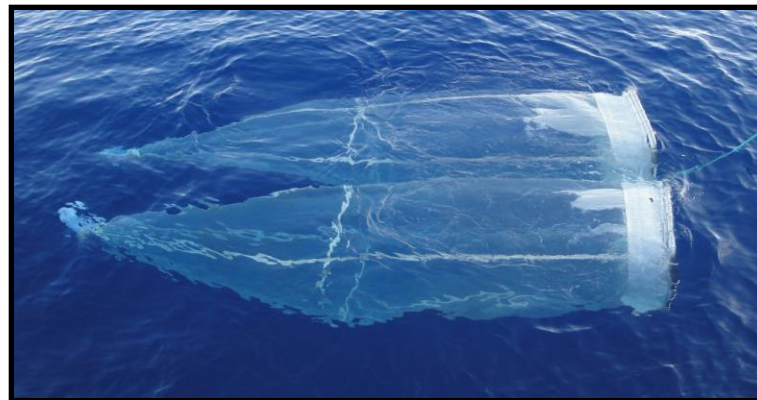
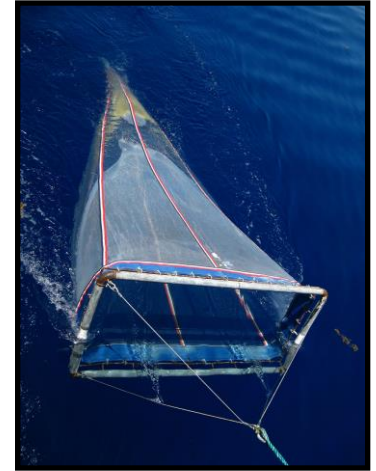
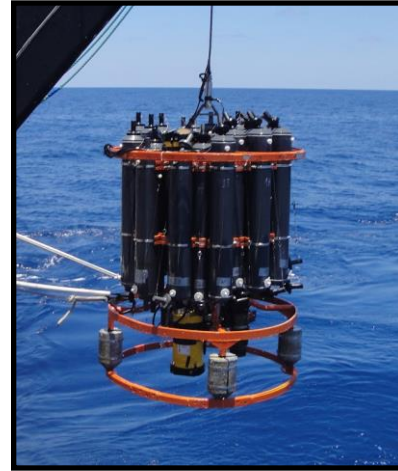
55 flow-through stations (chl_a, nuts, p.plank)

continuous SADCP and TSG (w/ chl_a, CDOM)

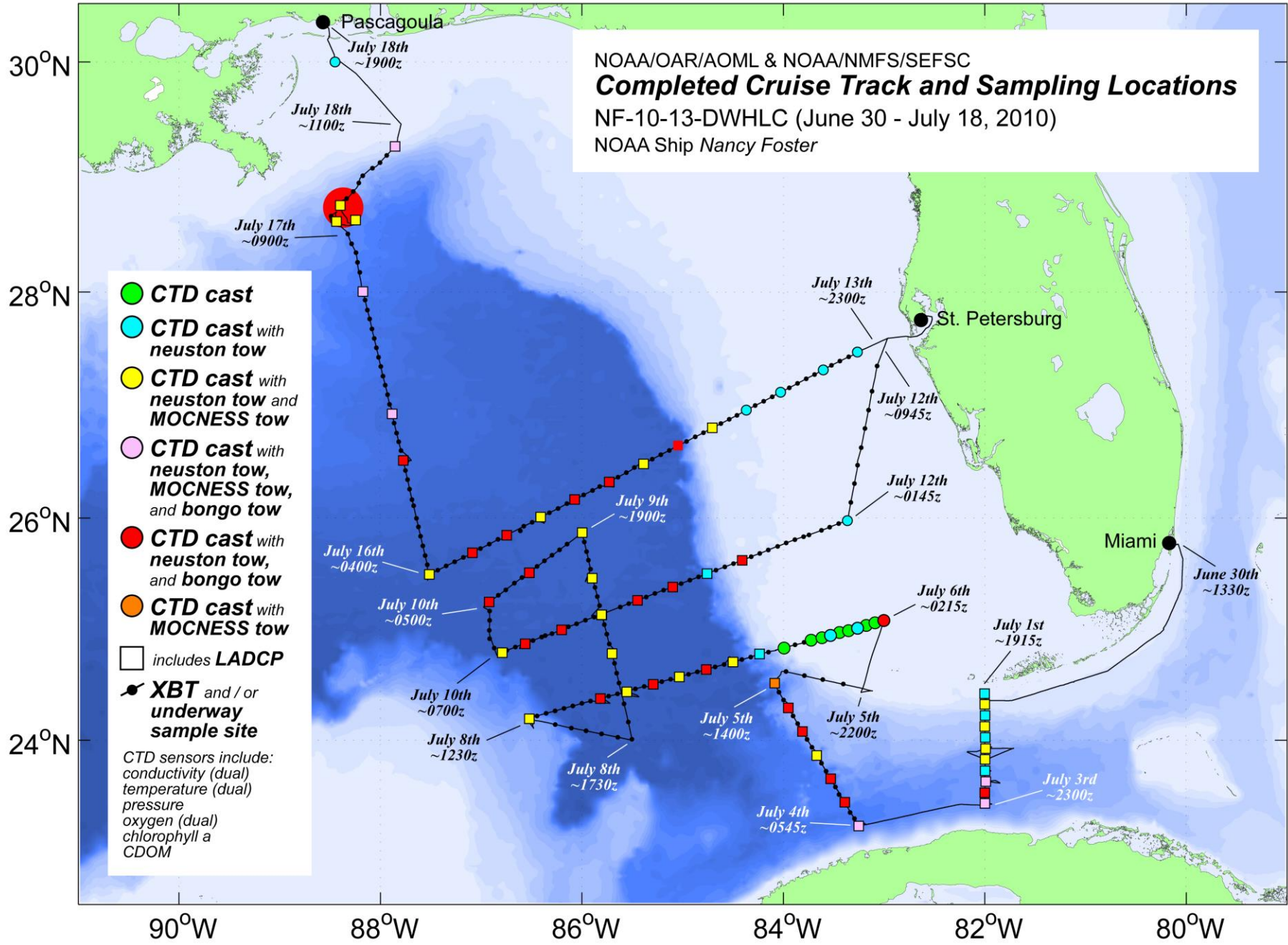
69 neuston net tows (947 μm mesh)

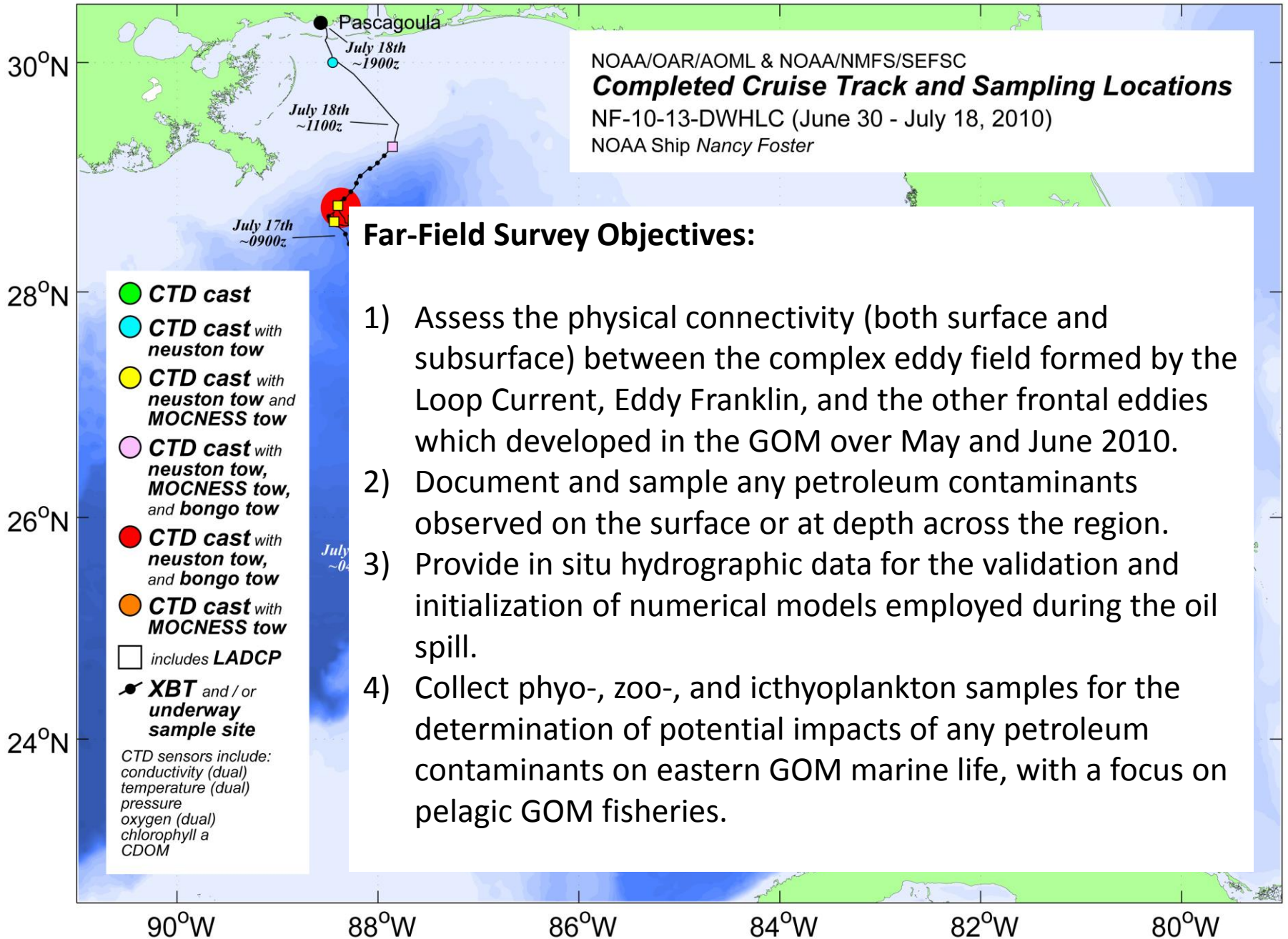
29 bongo net tows (505 μm mesh)

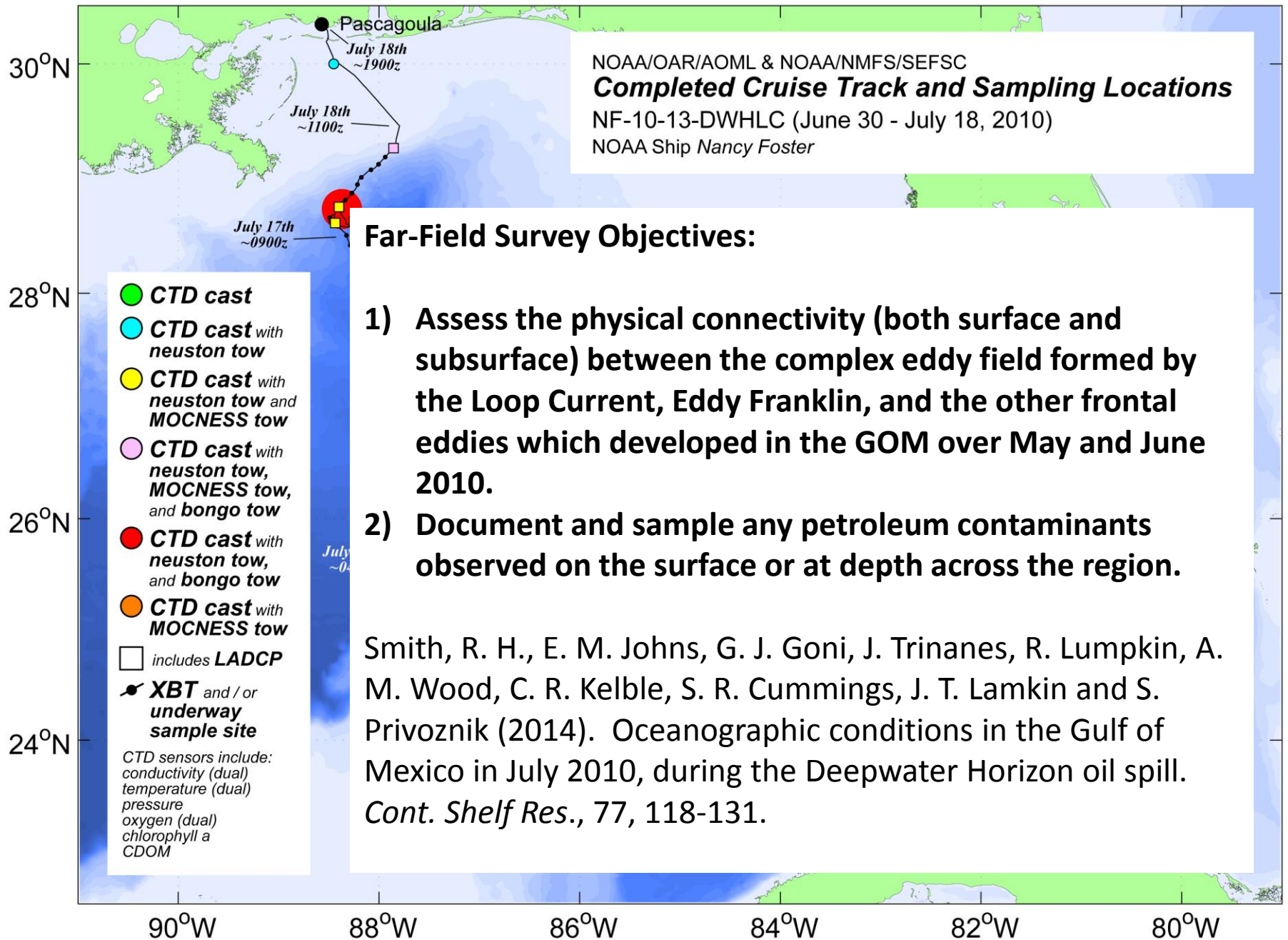
28 MOCNESS tows (505 μm mesh)

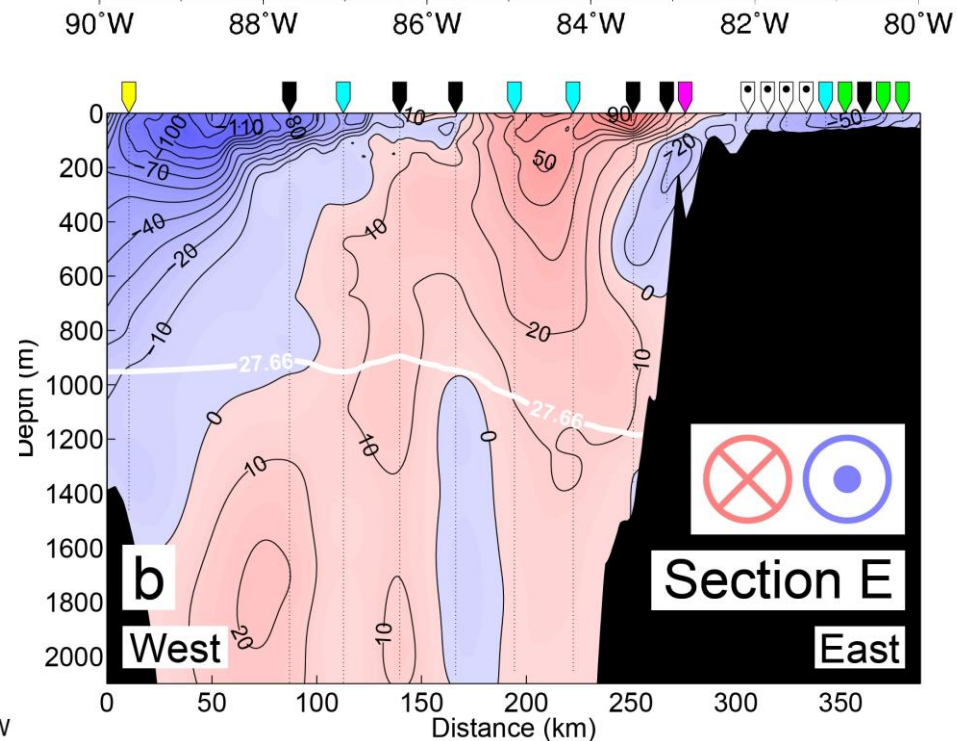
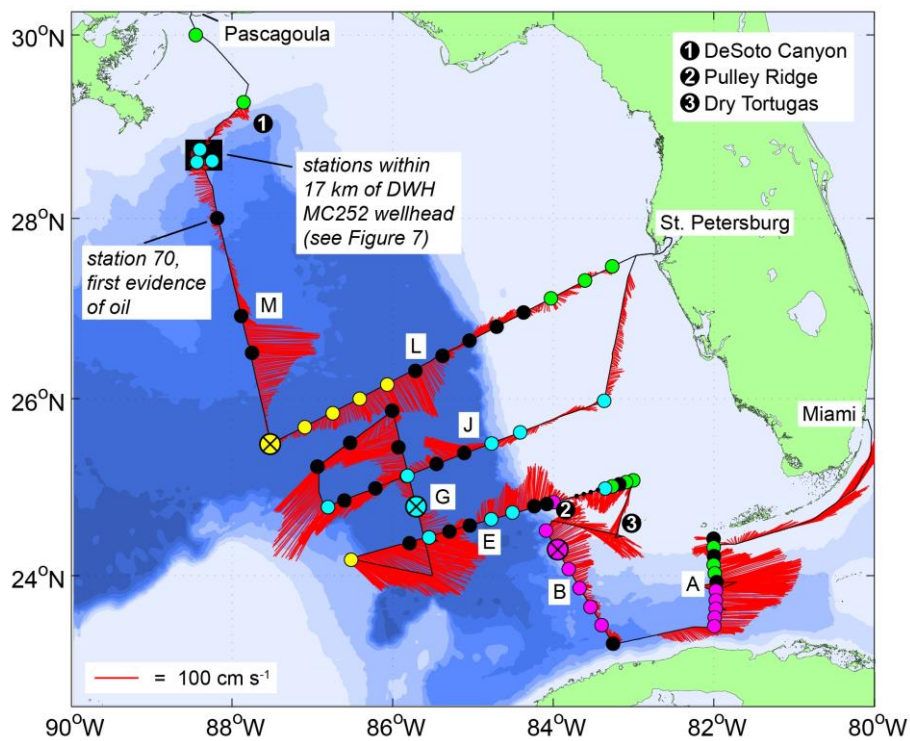
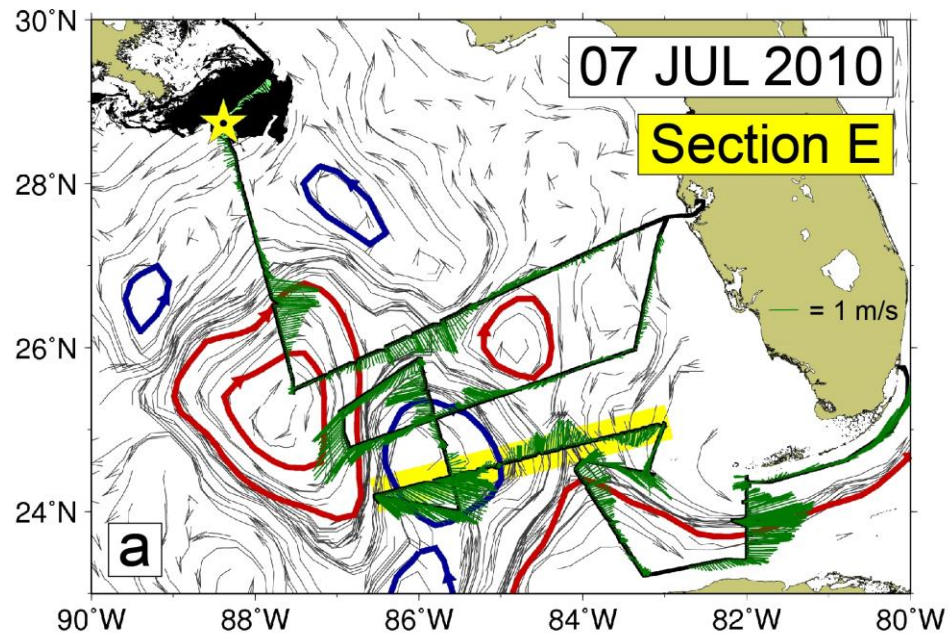
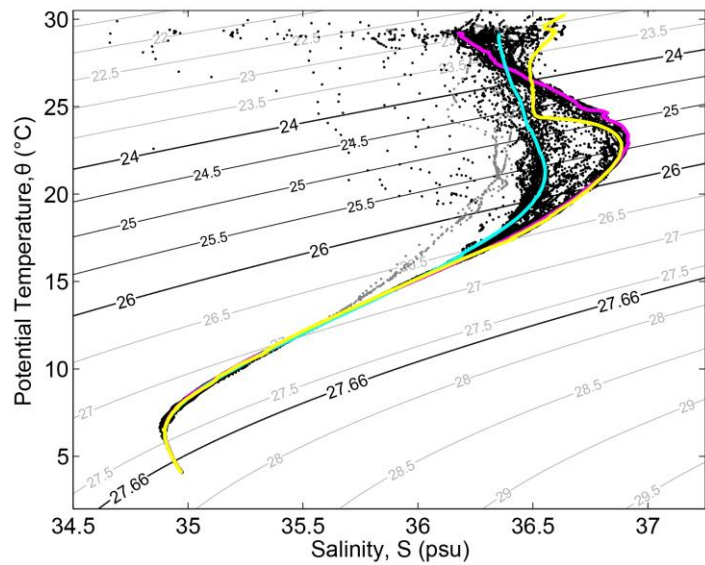


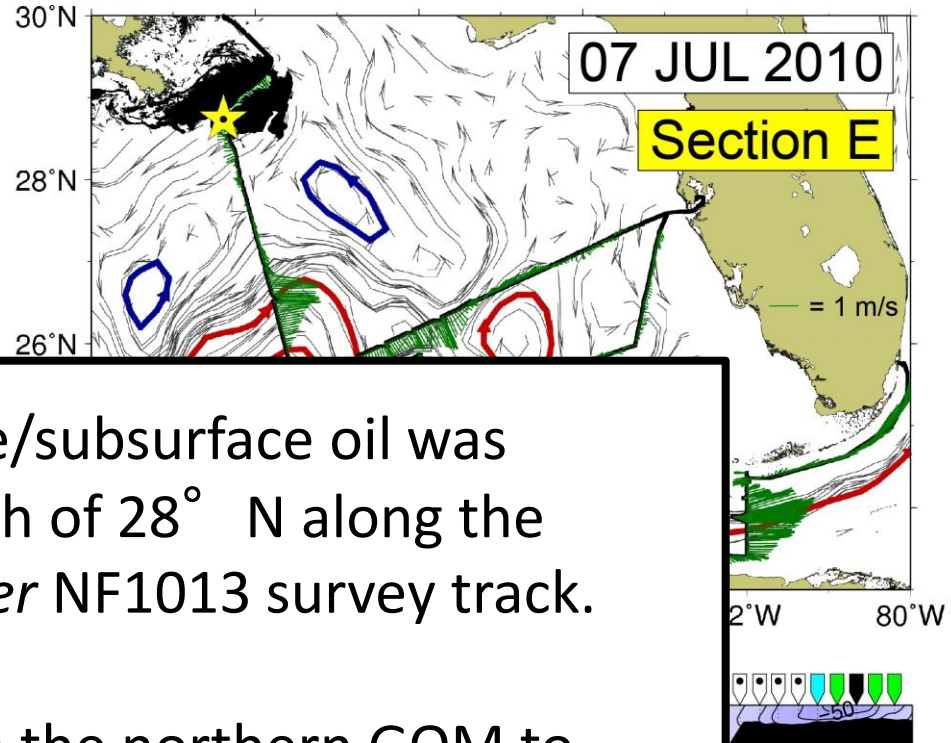
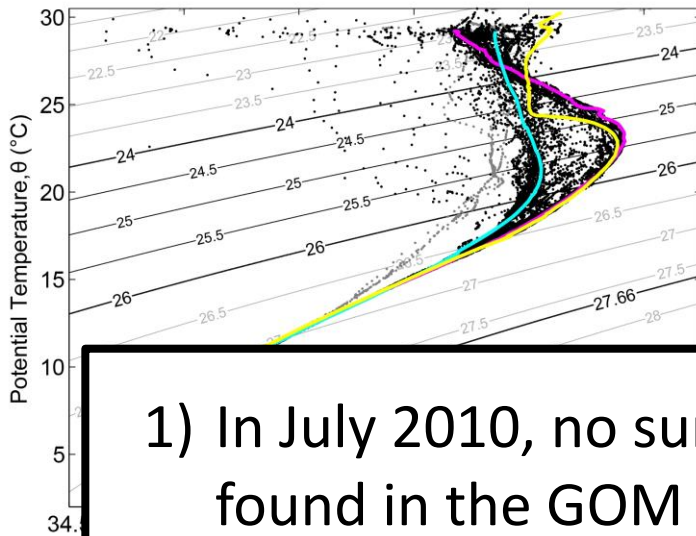
NOAA/OAR/AOML & NOAA/NMFS/SEFSC
Completed Cruise Track and Sampling Locations
 NF-10-13-DWHLC (June 30 - July 18, 2010)
 NOAA Ship Nancy Foster



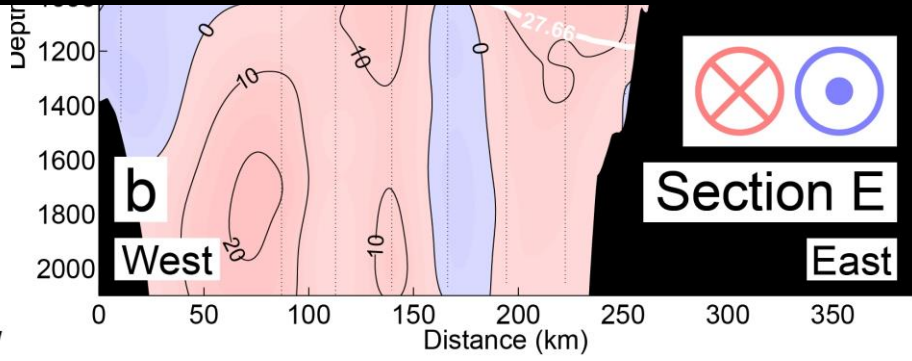
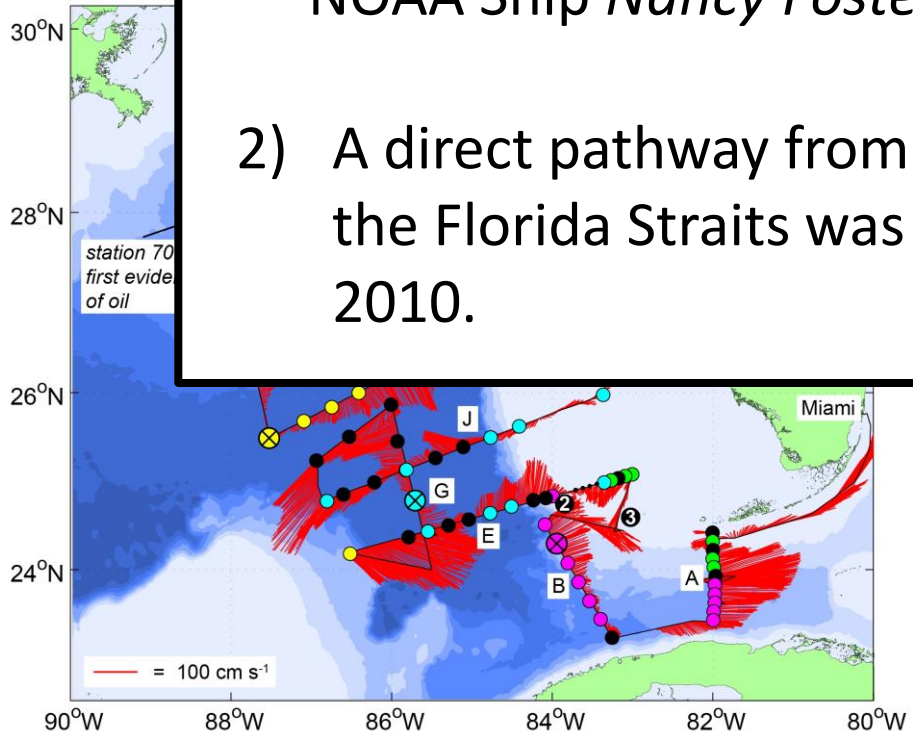


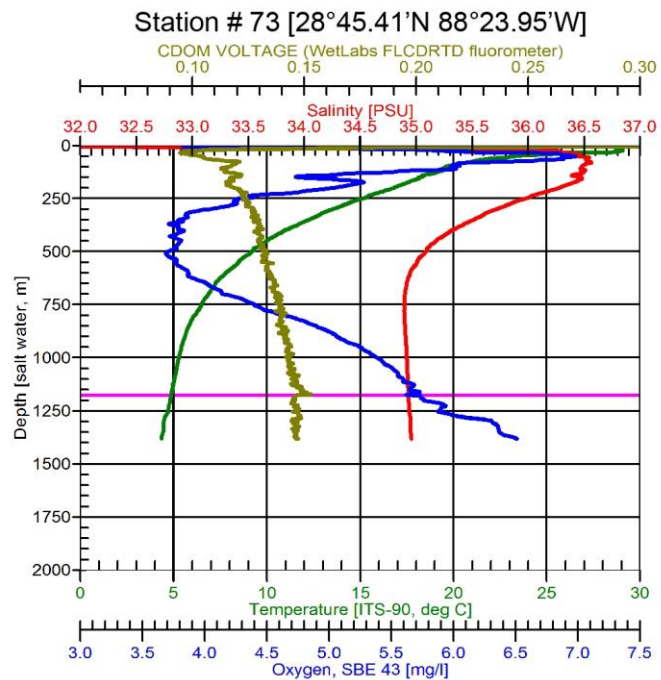
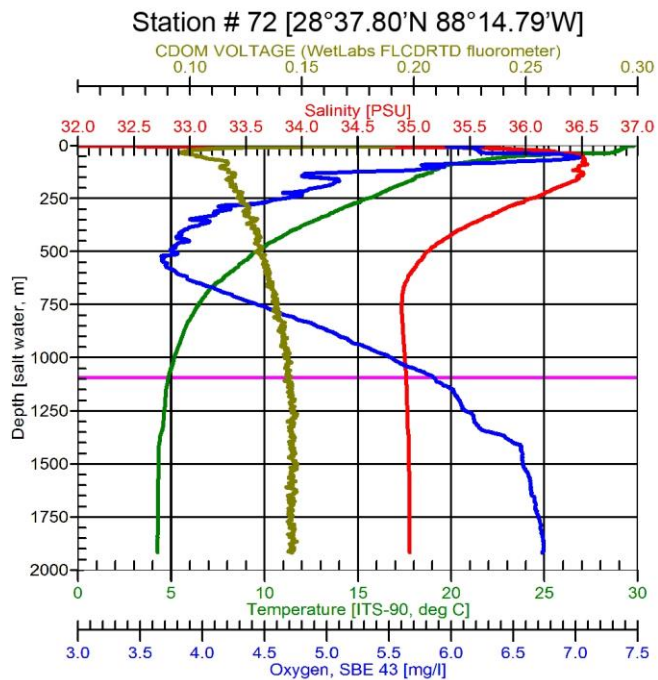
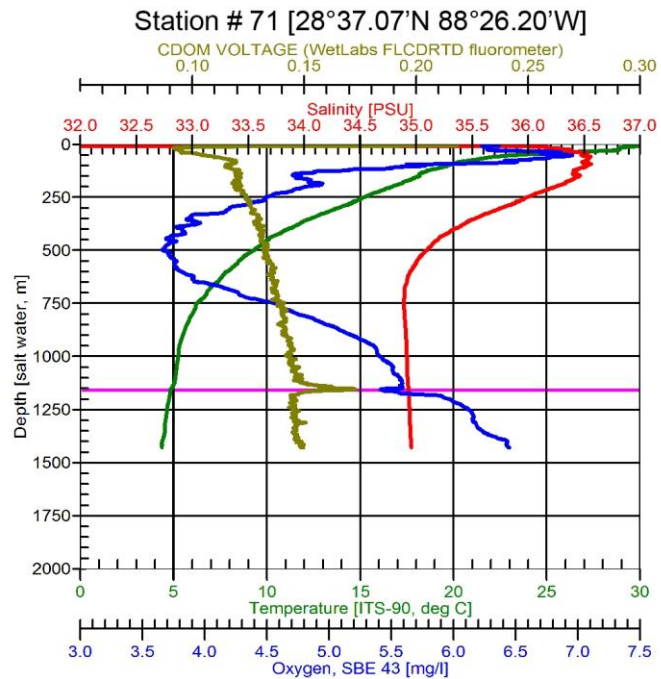
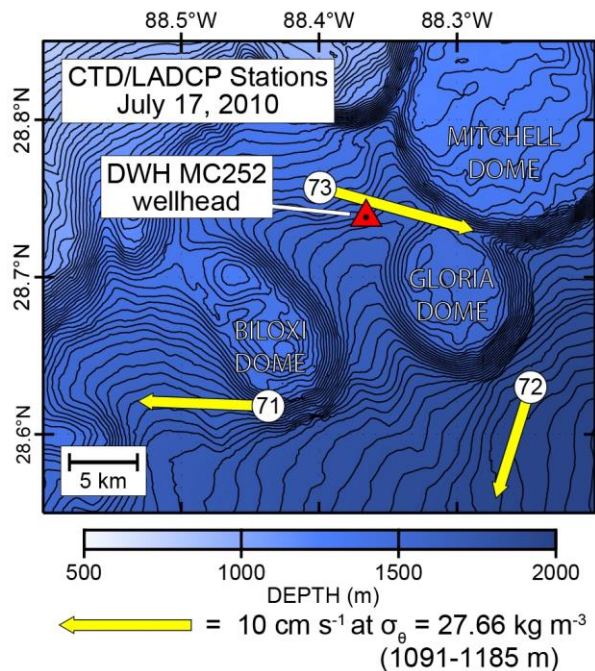


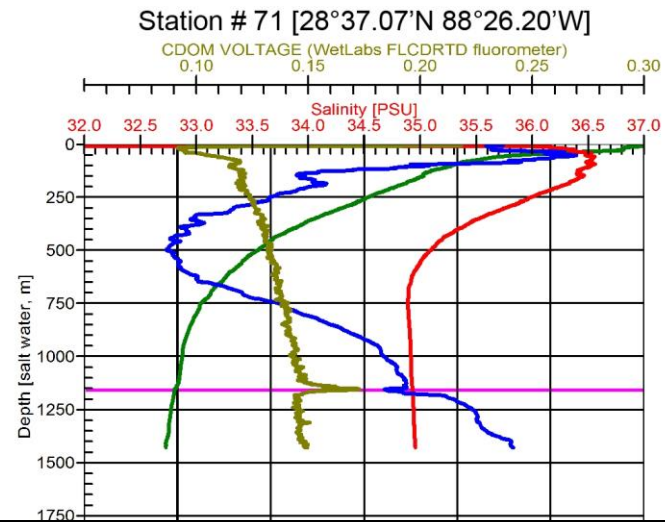
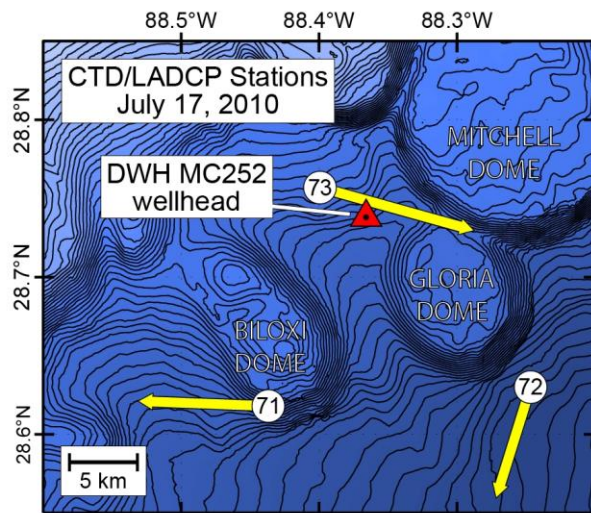




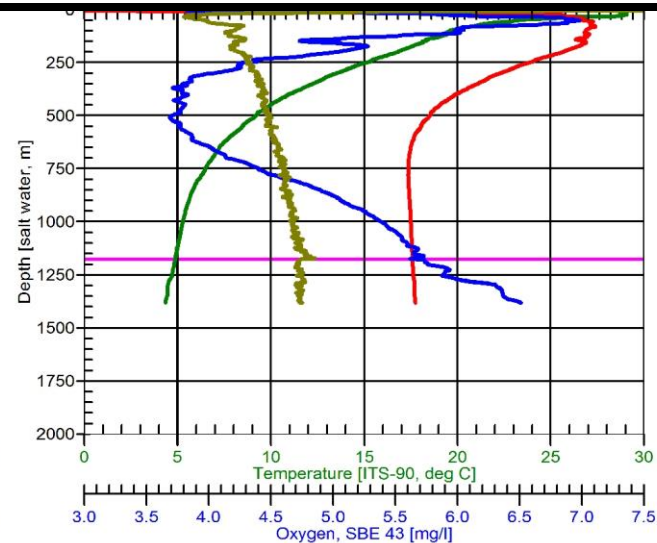
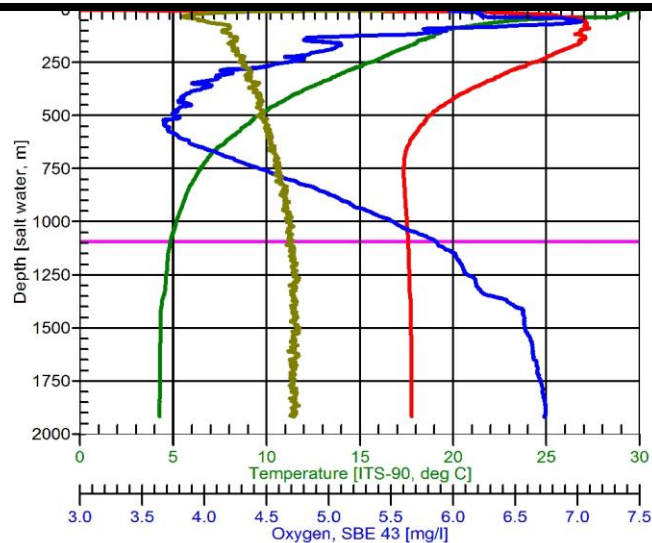
- 1) In July 2010, no surface/subsurface oil was found in the GOM south of 28° N along the NOAA Ship *Nancy Foster* NF1013 survey track.
- 2) A direct pathway from the northern GOM to the Florida Straits was no longer in place by July 2010.







3) On July 17, 2010, a subsurface hydrocarbon plume was confirmed 15 km southwest of the wellhead at 1154 m depth.





ECOSUR

ECOSUR
Zooplankton Lab

S. Morales

L. Vásquez-Yeomans

L. Carrillo

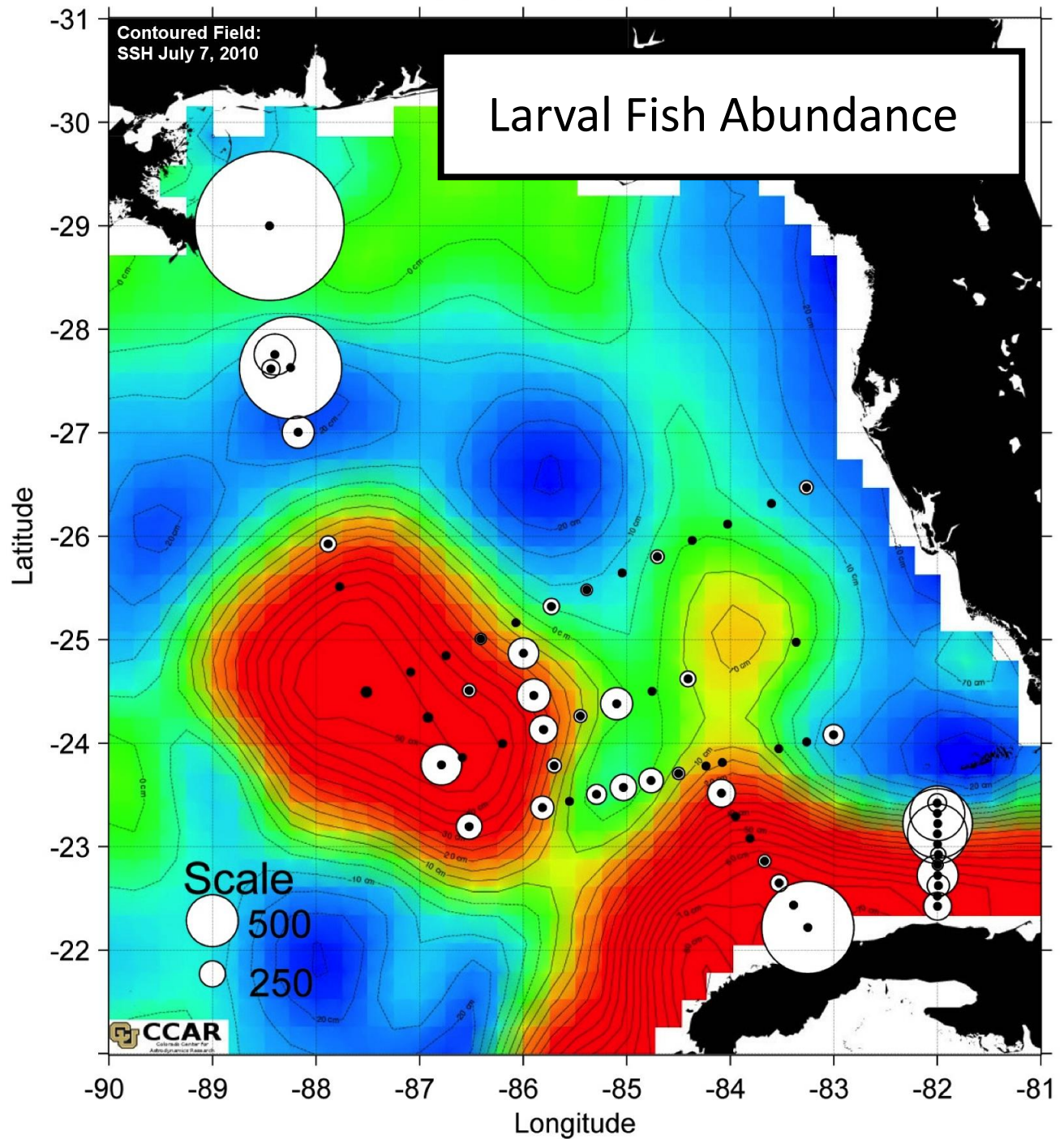
SEFSC

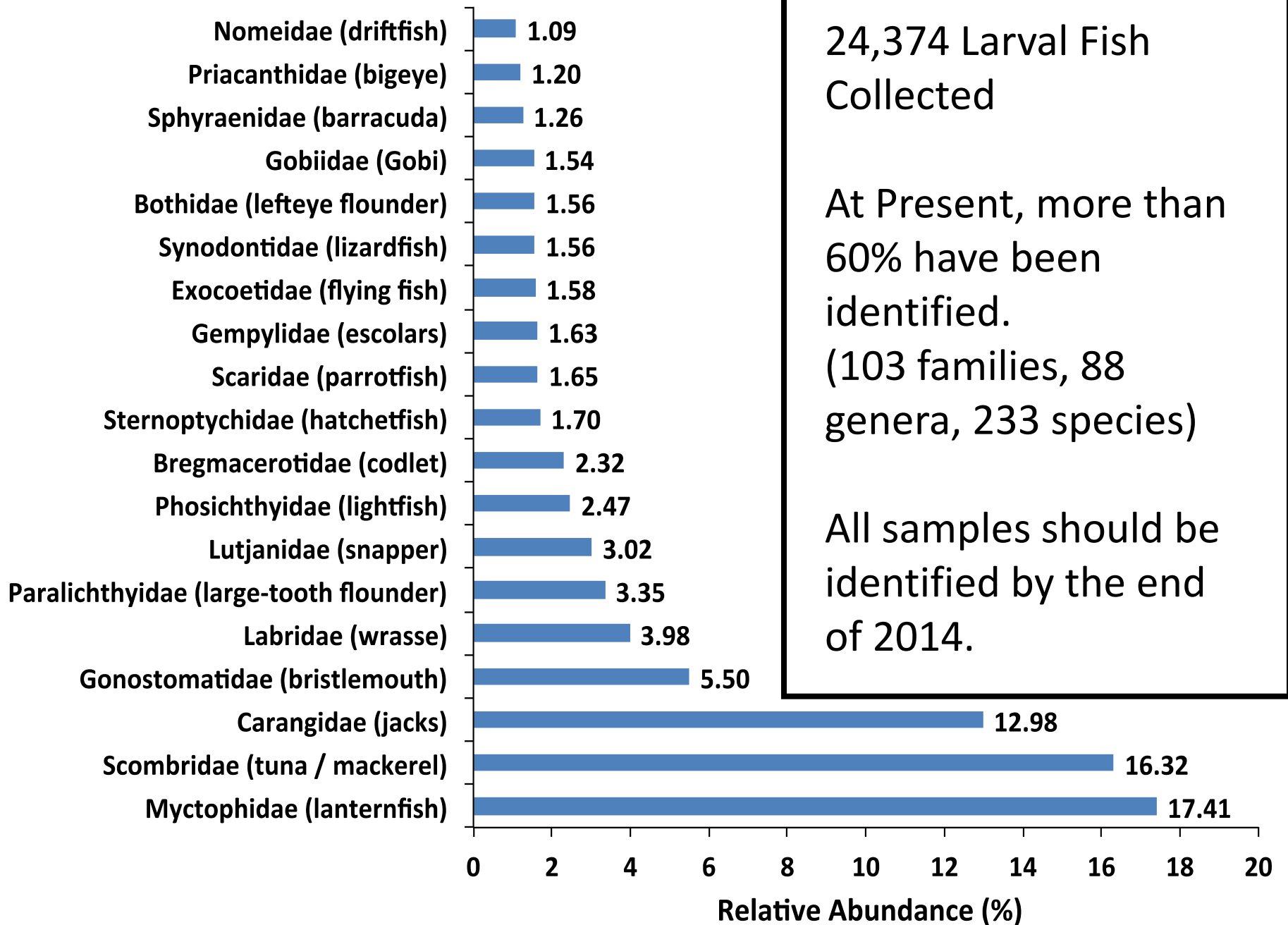
ELH Lab

E. Malca

S. Privoznik

J. Lamkin





Myctophidae

Benthoosema suborbitale

Bolinichthys phototorax

Centrobranchus nigroocellatus

Ceratoscopelus townsendi

Diaphus brachycephalus

Diaphus mollis

Diogenichthys atlanticus

Gonichthys cocco

Hygophum reinhardtii

Hygophum taaningi

Lampadena luminosa

Lampadena anomala

Lampadena urophaos

Lampanyctus alatus

Lepidophanes guentheri

Nannobranchium cuprarium

Nannobranchium lineatum

Notolychnus valdiviae

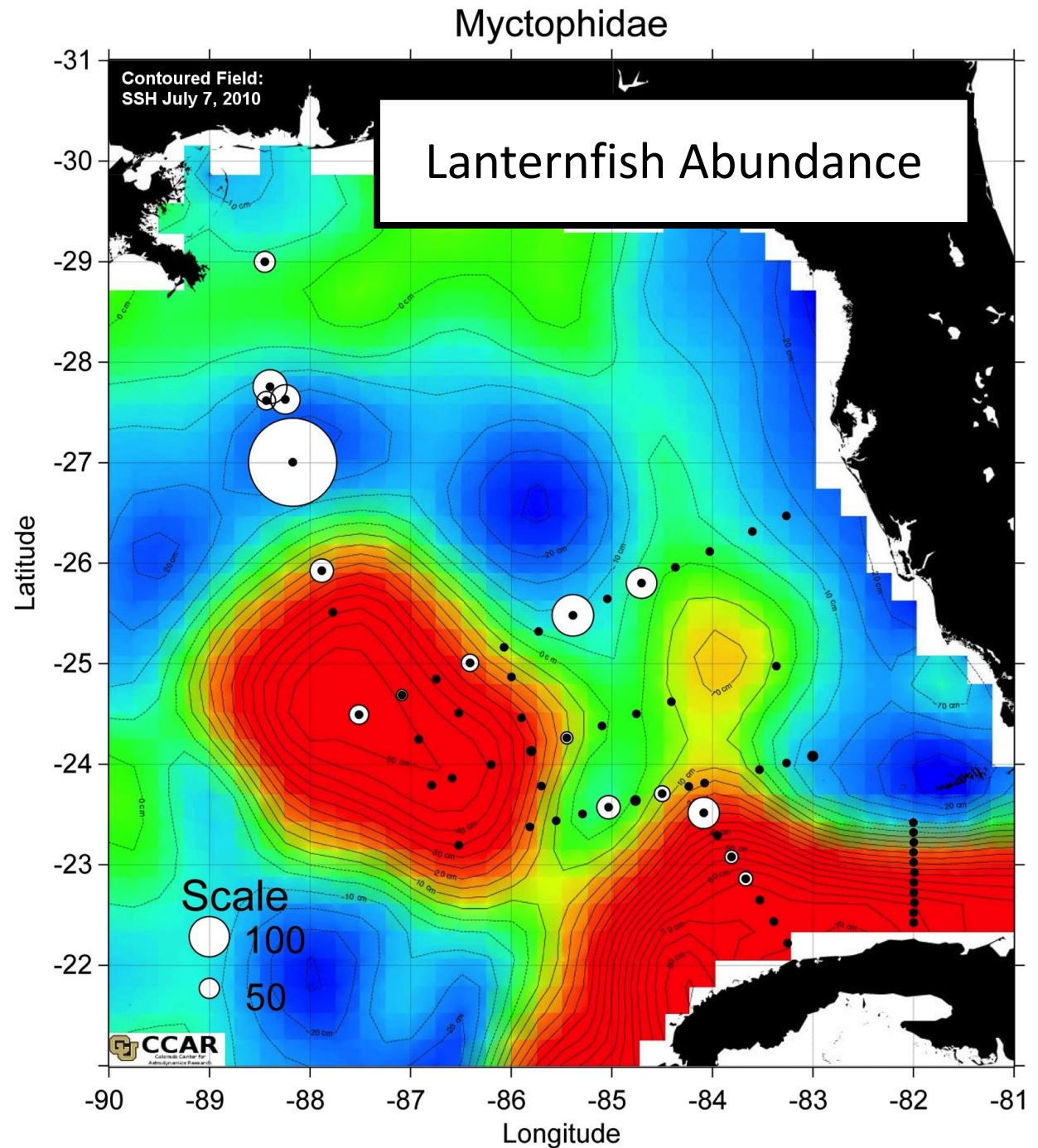
Myctophum affine

Myctophum asperum

Myctophum obtusirostre

Myctophum selenops

Myctophum nitidulum



Myctophidae

Benthosema suborbitale

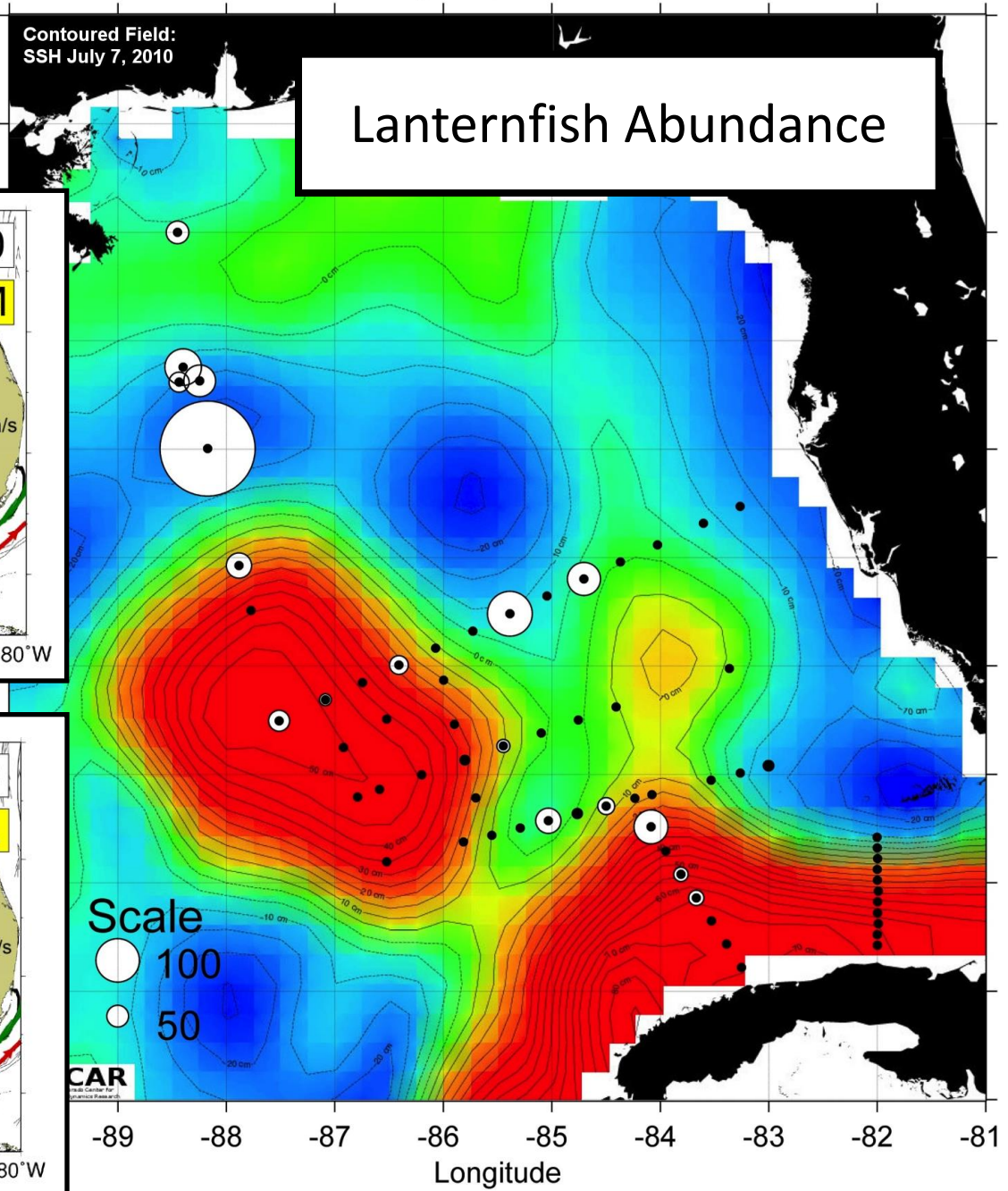
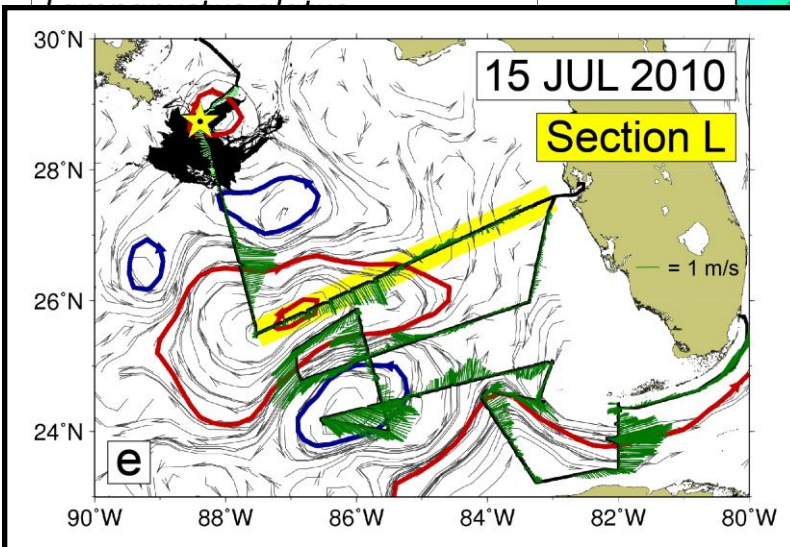
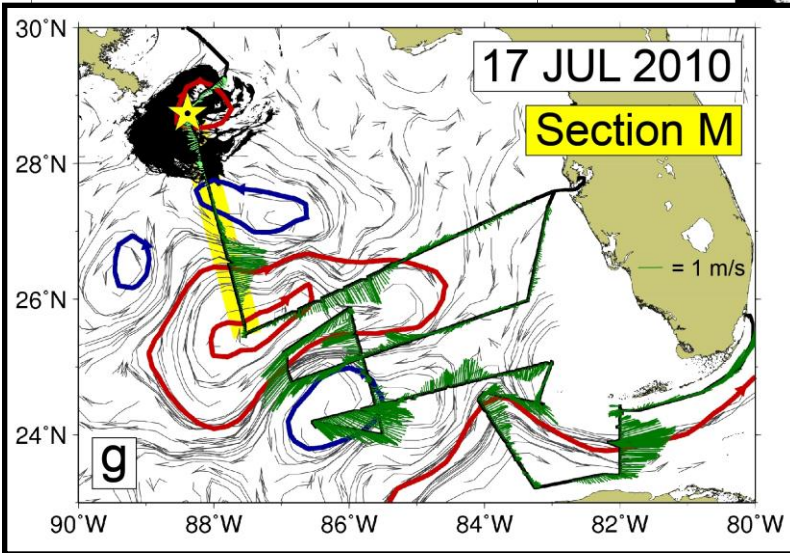
Bolinichthys phototorax

Centrobranchus nigroocellatus

Myctophidae

Contoured Field:
SSH July 7, 2010

Lanternfish Abundance



Scombridae

Auxis rochei

Auxis thazard

*Acanthocybium
solandri*

Euthynnus alletteratus

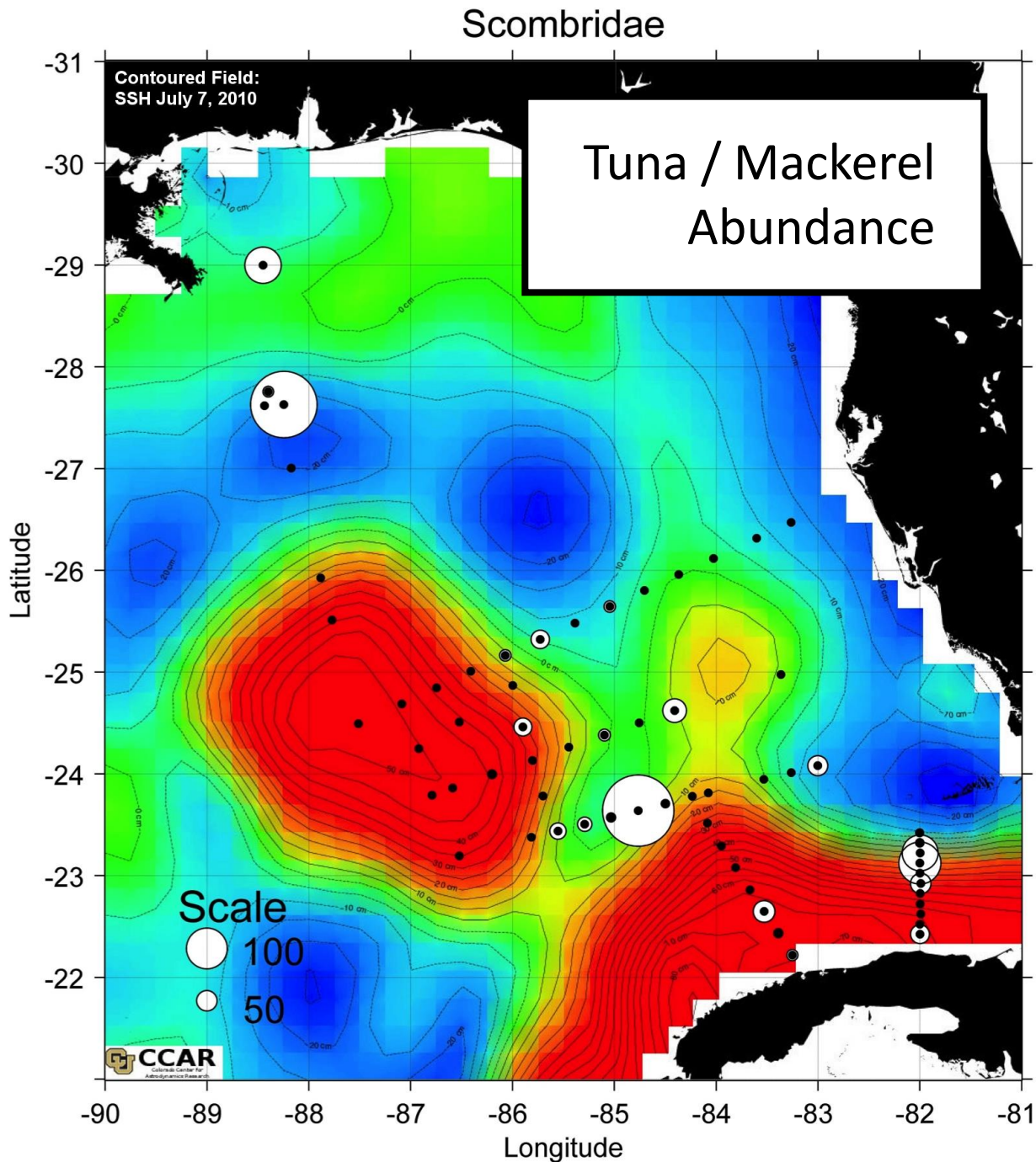
Katsuwonus pelamis

Scomber colias

Scomberomorus cavalla

Thunnus atlanticus

Thunnus spp.



Scombridae

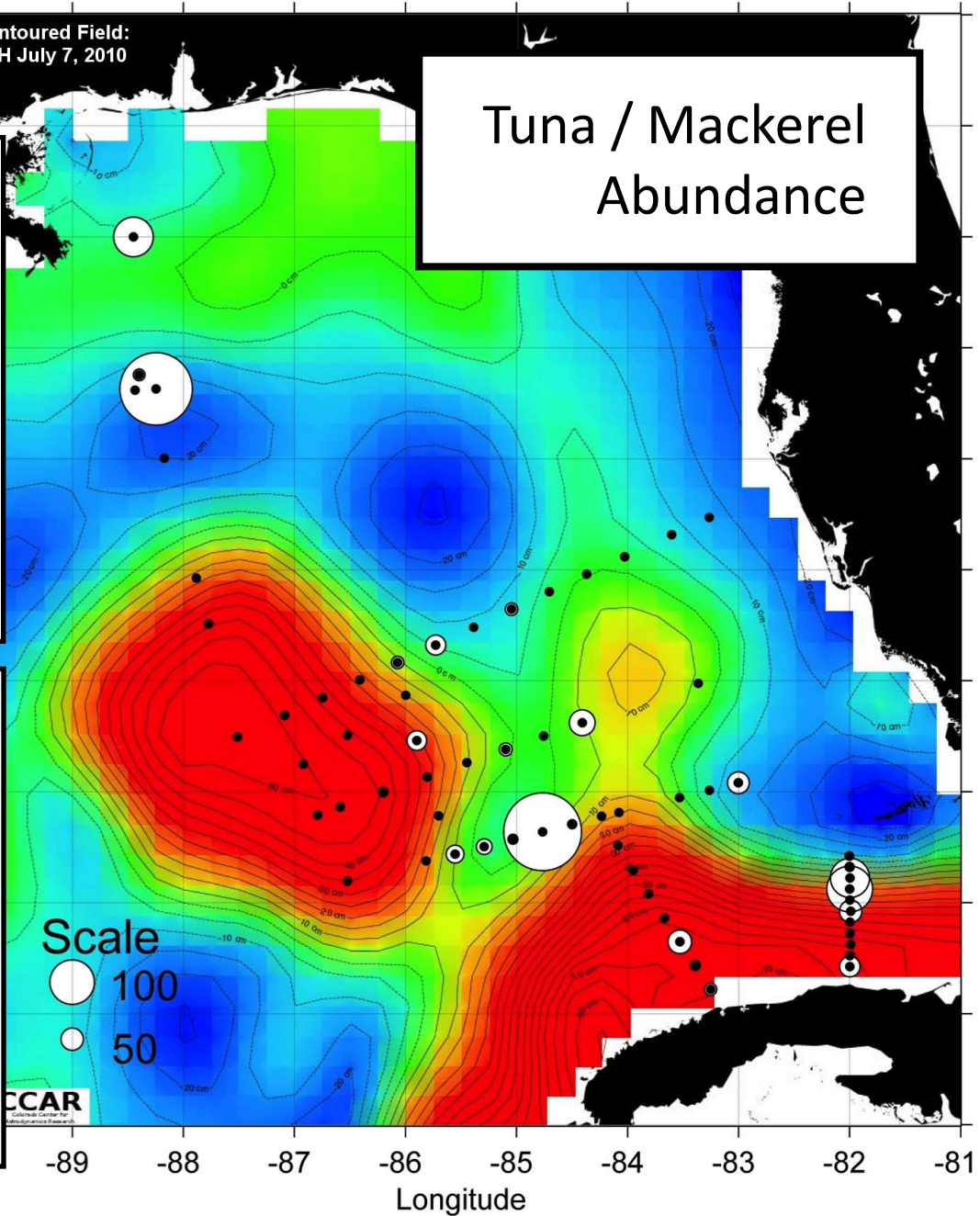
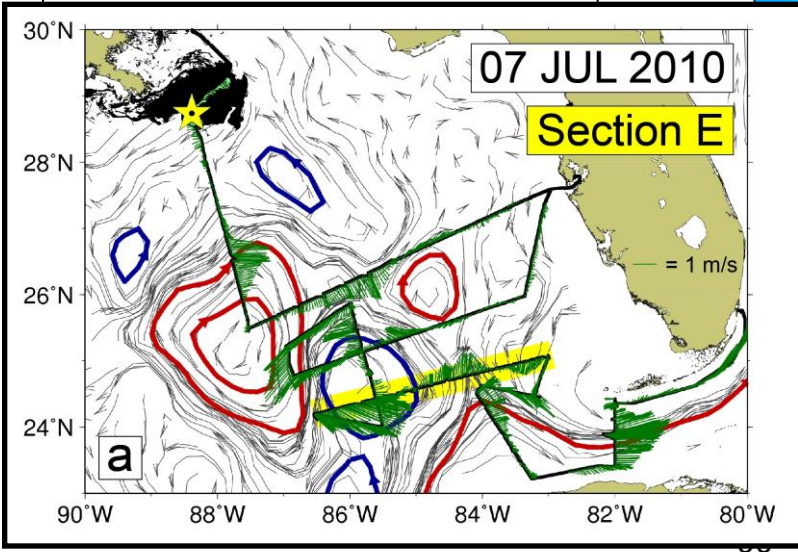
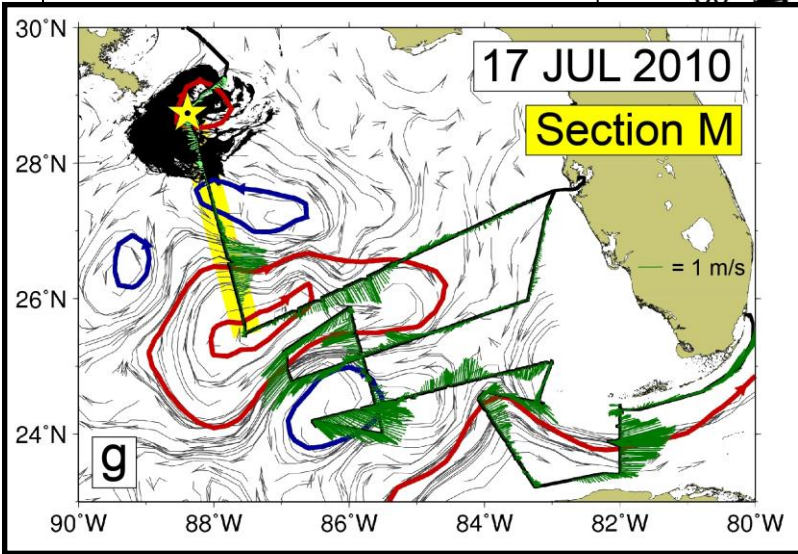
Scombridae

-31

-30

Contoured Field:
SSH July 7, 2010

Tuna / Mackerel Abundance



Carangidae

Alectis ciliaris

Chloroscombrus chrysurus

Caranx crysos

Caranx hippos/latus

Caranx ruber/bartholomaei

Decapterus punctatus

Elagatis bipinnulata

Selar crumenophthalmus

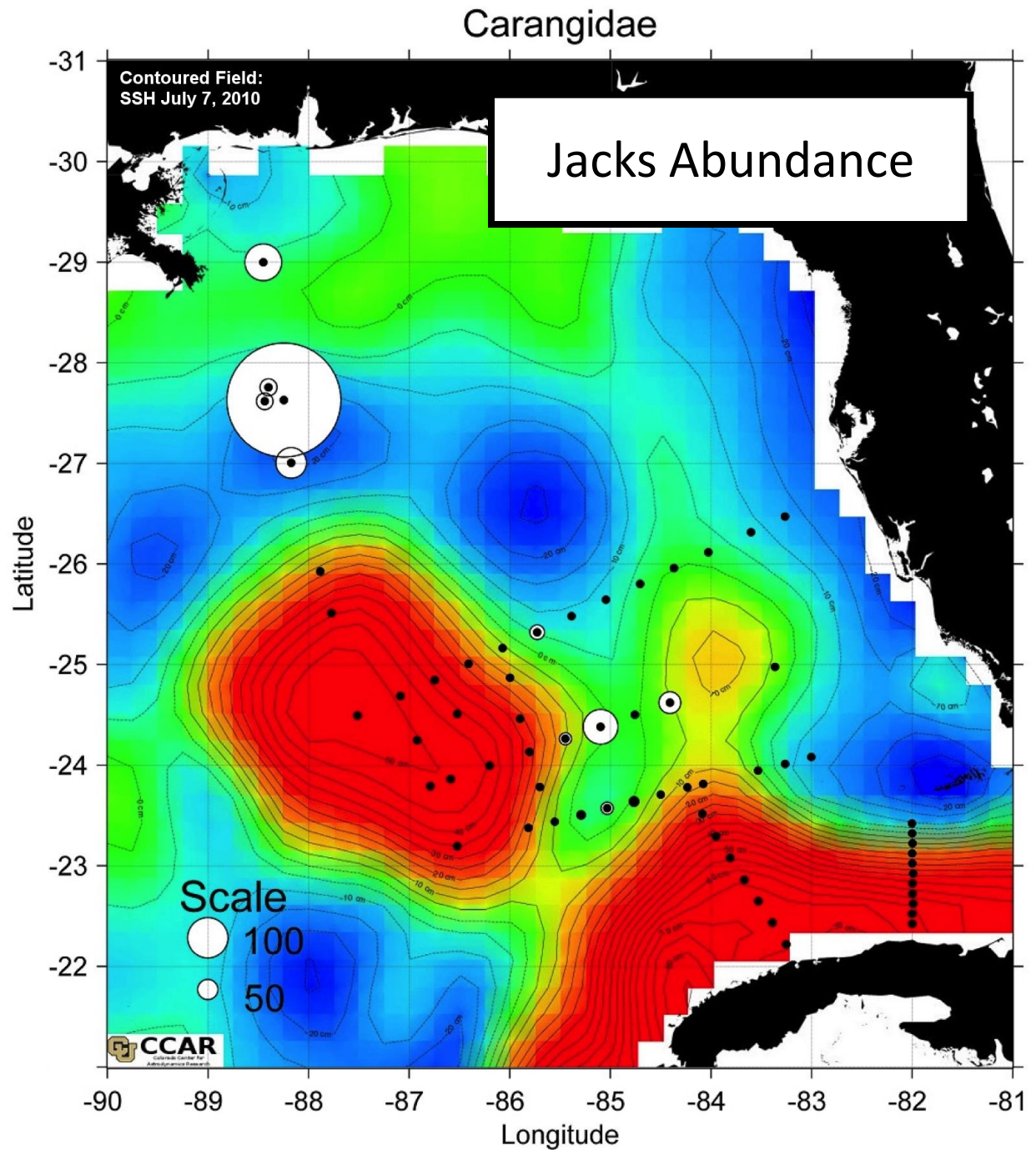
Selene setapinnis

Seriola dumerili

Seriola fasciata

Seriola zonata

Trachinotus falcatus



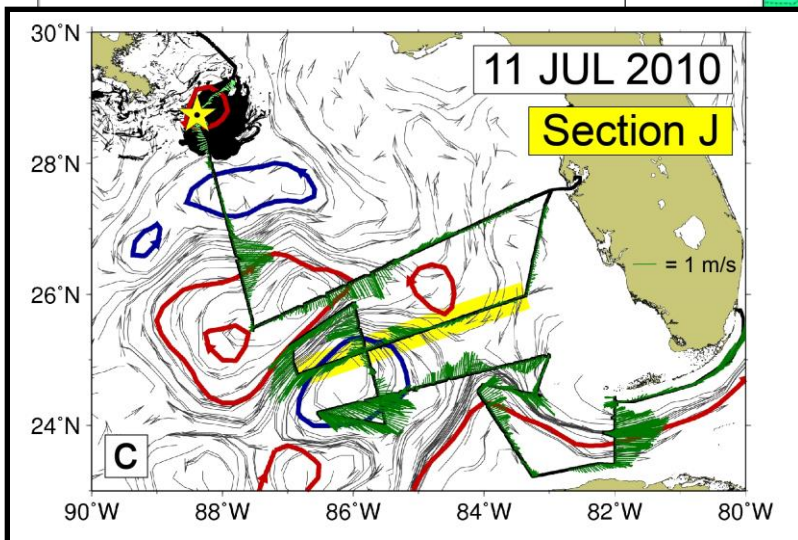
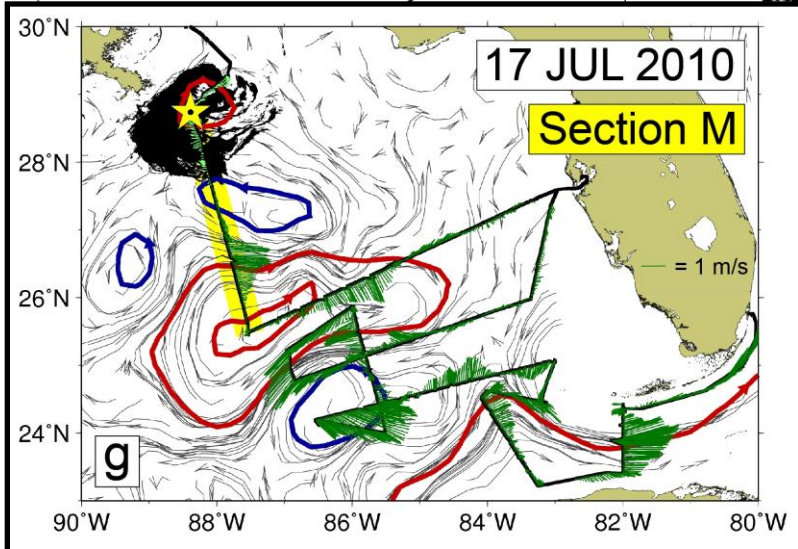
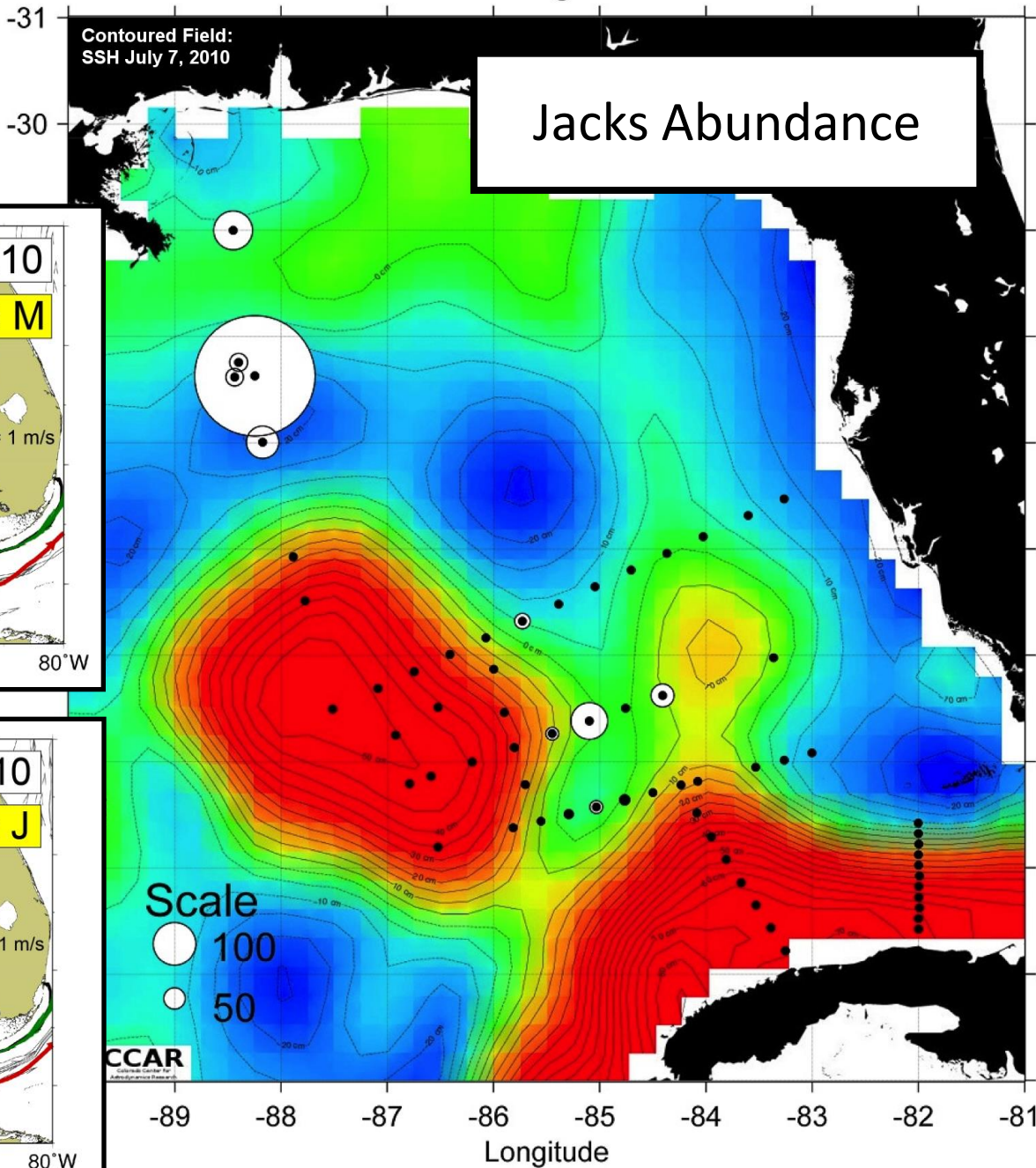
Carangidae

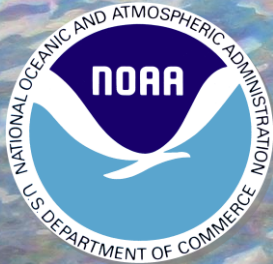
Alectis ciliaris

Chloroscombrus chrysurus

Carangidae

Jacks Abundance





Thanks!



NF1013 Science Team
July 2010