Deepwater Horizon Oil Disaster: 'Pristine' Gulf of Mexico

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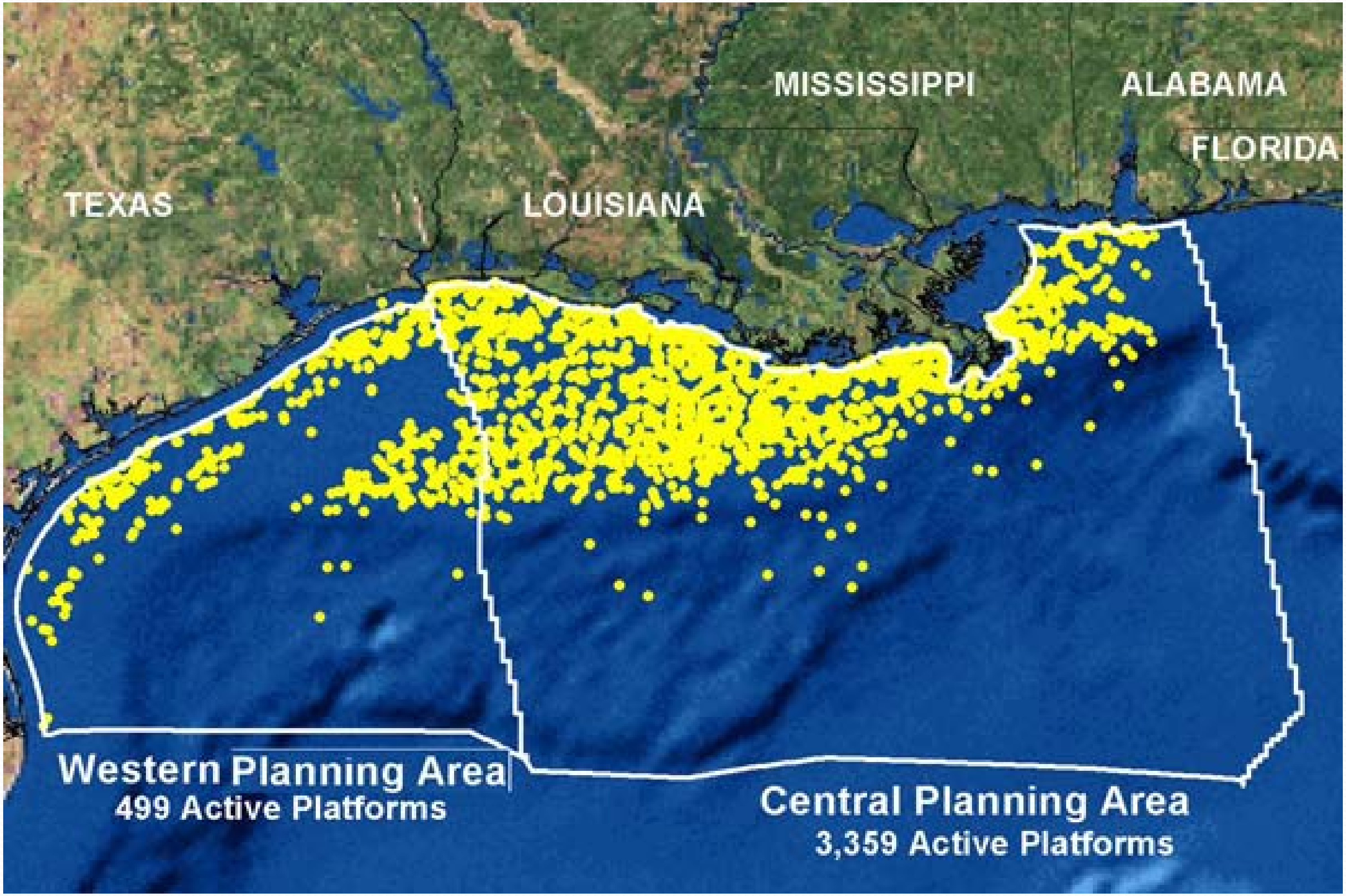
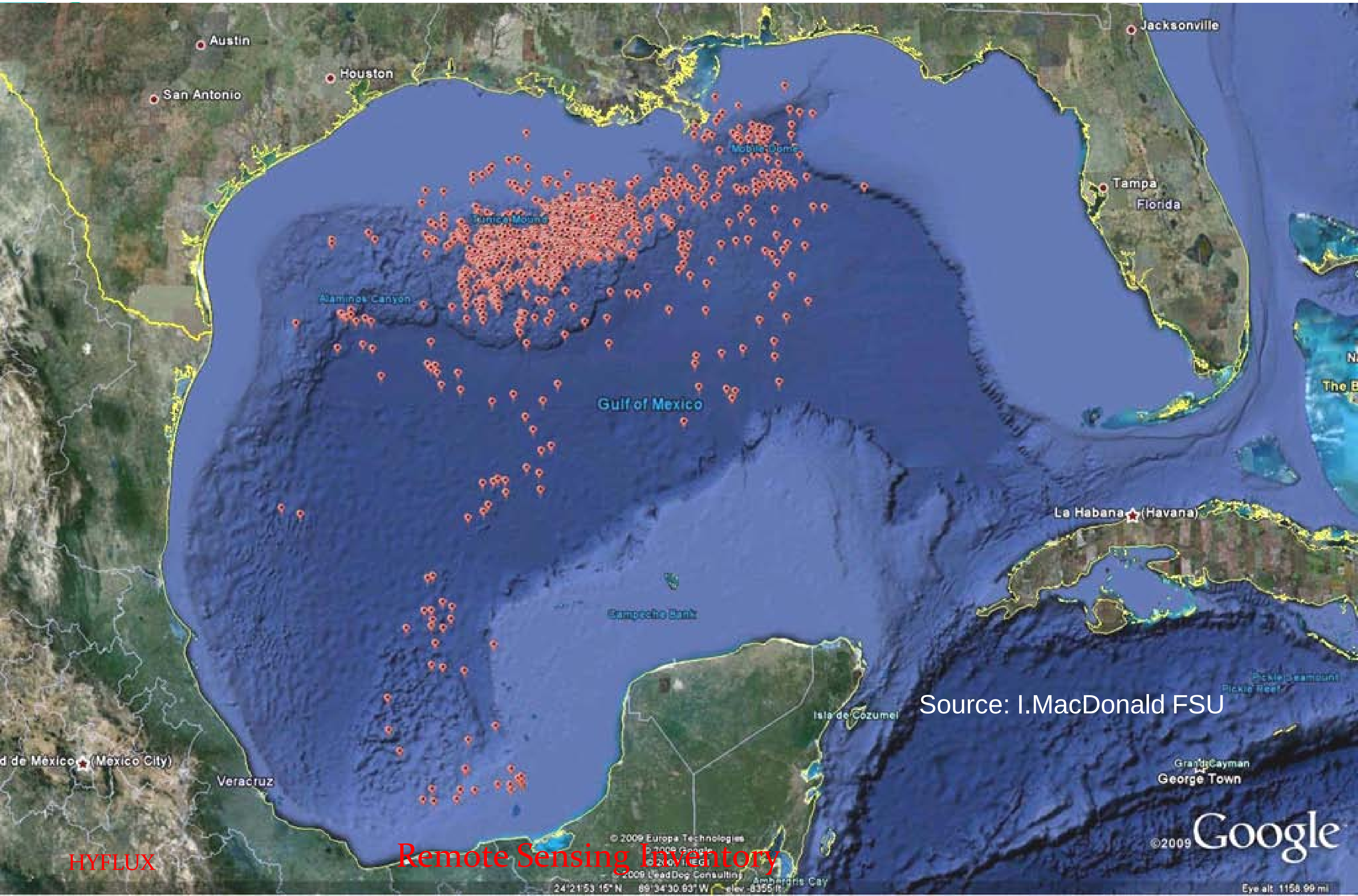
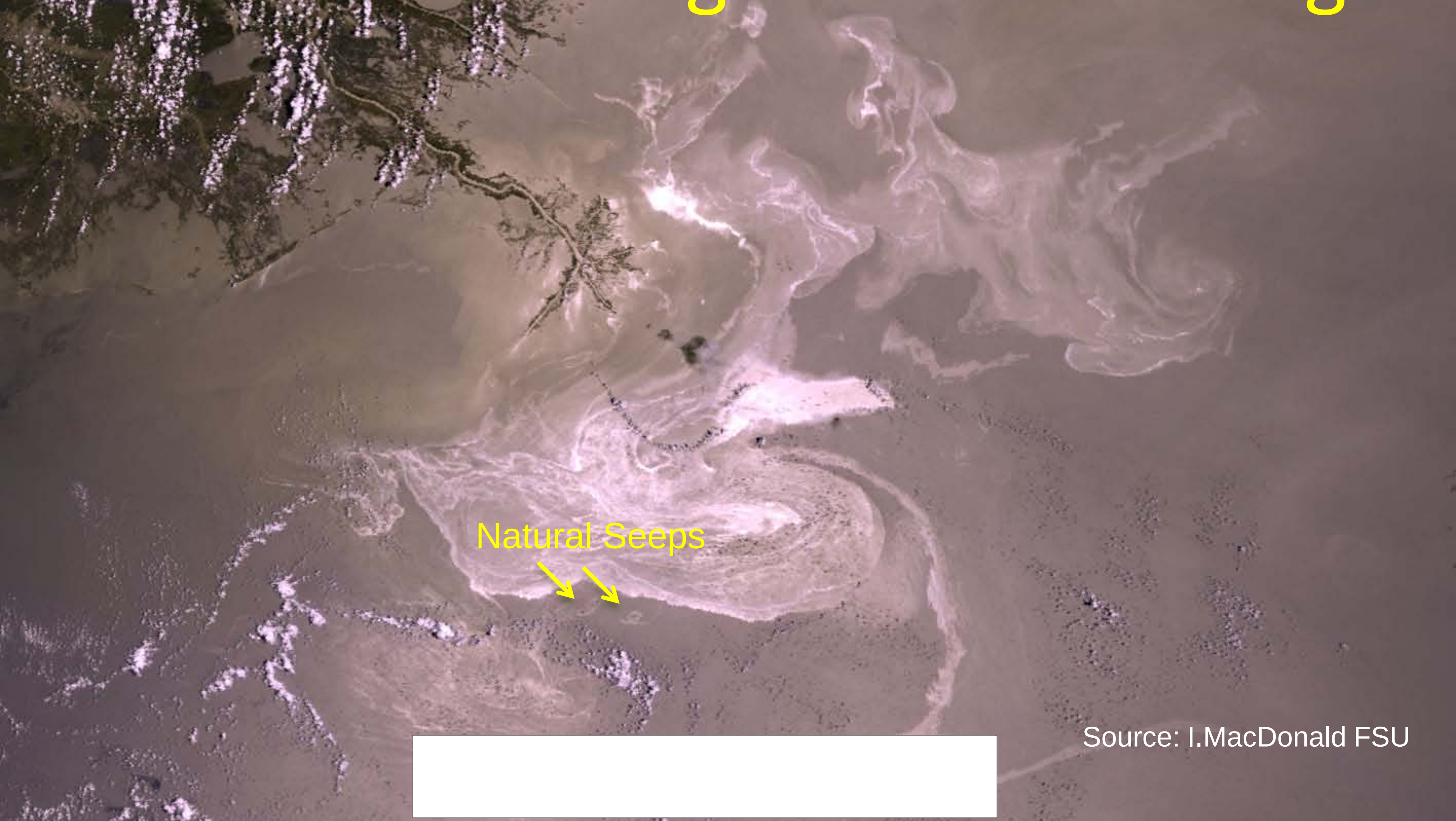


≈ 4000 active oil/gas platforms in Gulf of Mexico

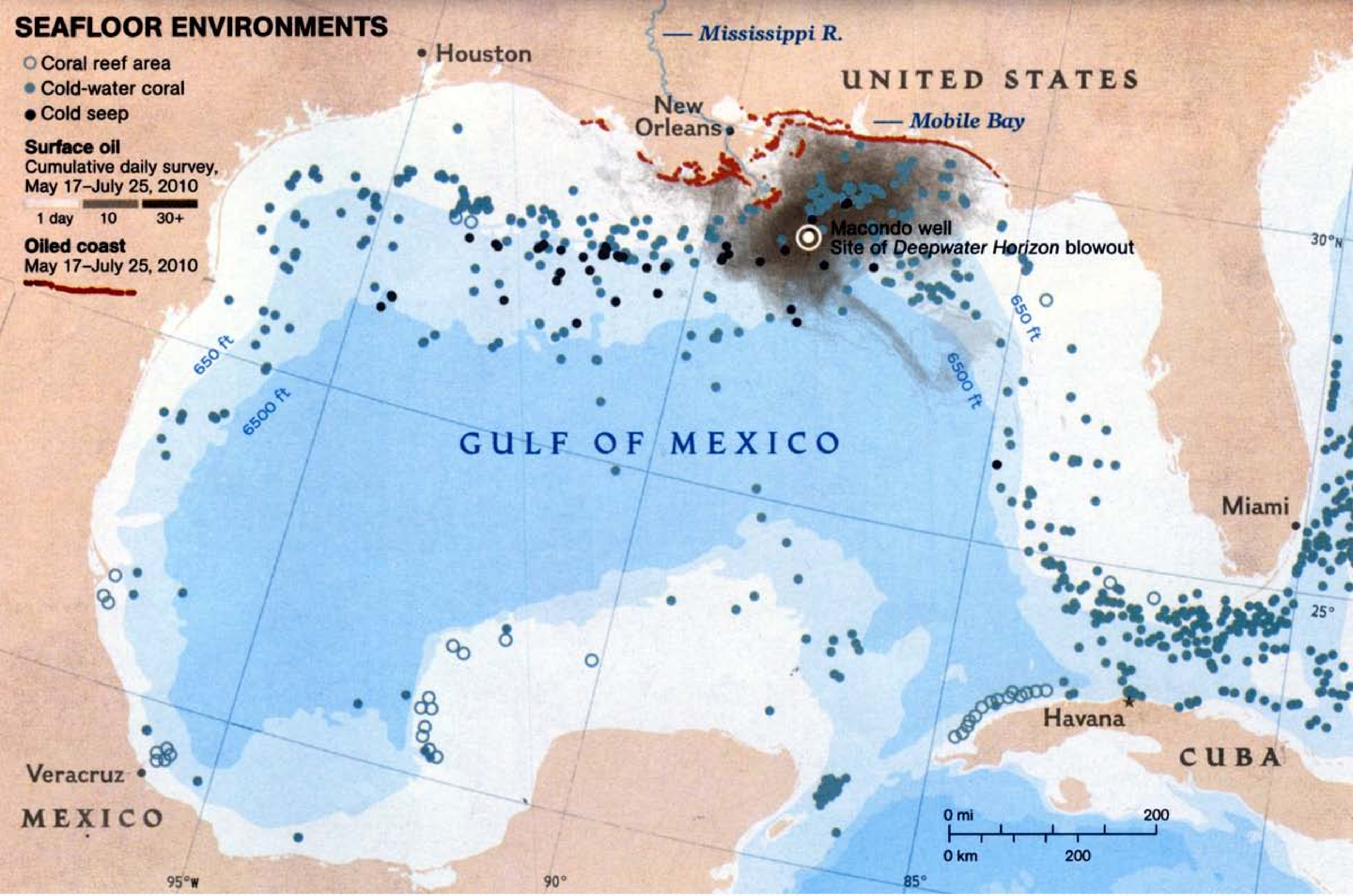
~1000 natural seeps discharge 400,000 barrels of oil per year across the Gulf



Surface oil at height of BP discharge



Source: I.MacDonald FSU


SEAFLOOR ENVIRONMENTS
Coral reef area
Cold-water coral
Cold seep
Surface oil
Cumulative daily survey, May 17–July 25, 2010
1 day
10
30+
Oiled coast
May 17–July 25, 2010
Houston
Mississippi R.
UNITED STATES
New Orleans
Mobile Bay
Macondo well
Site of Deepwater Horizon blowout
30°N
650 ft
6500 ft
650 ft
6500 ft
GULF OF MEXICO
Miami
25°
Havana
CUBA
Veracruz
MEXICO
0 mi
200
0 km
200
95°W
90°
85°

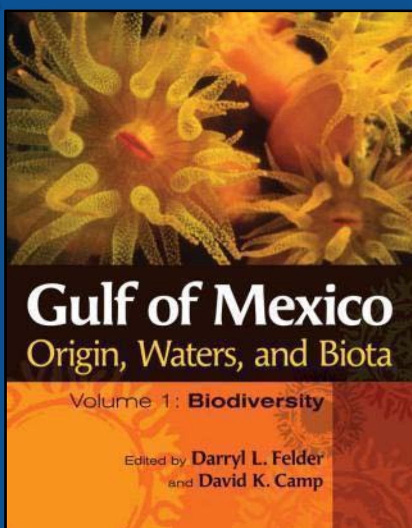
Source: NGS

Biota of the GOM: after 4 'long' years…

(Jan. 2004—Dec. 2007)

50 year update!

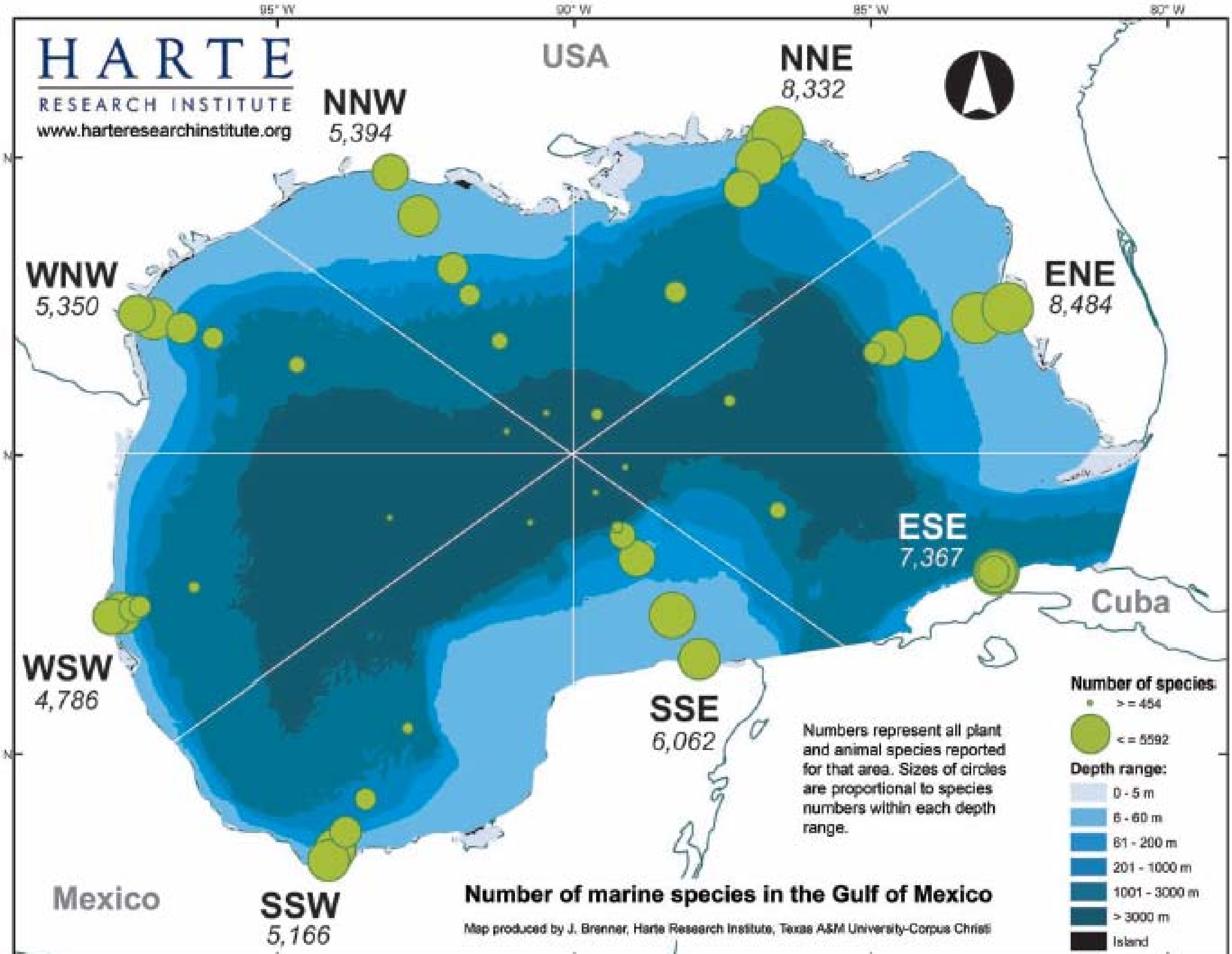
⬇



Felder and Camp, eds., 2009

Texas A&M University Press:

- *Focus: Cuba, Mexico & USA*
- *15,419 species*
- *40 groups (divisions & phyla)*
- *140 authors/taxonomists*
- *80 institutions*
- *15 countries*
- *79 chapters*
- *1393 pages*



95° W
90° W
85° W
80° W
30° N
25° N
20° N
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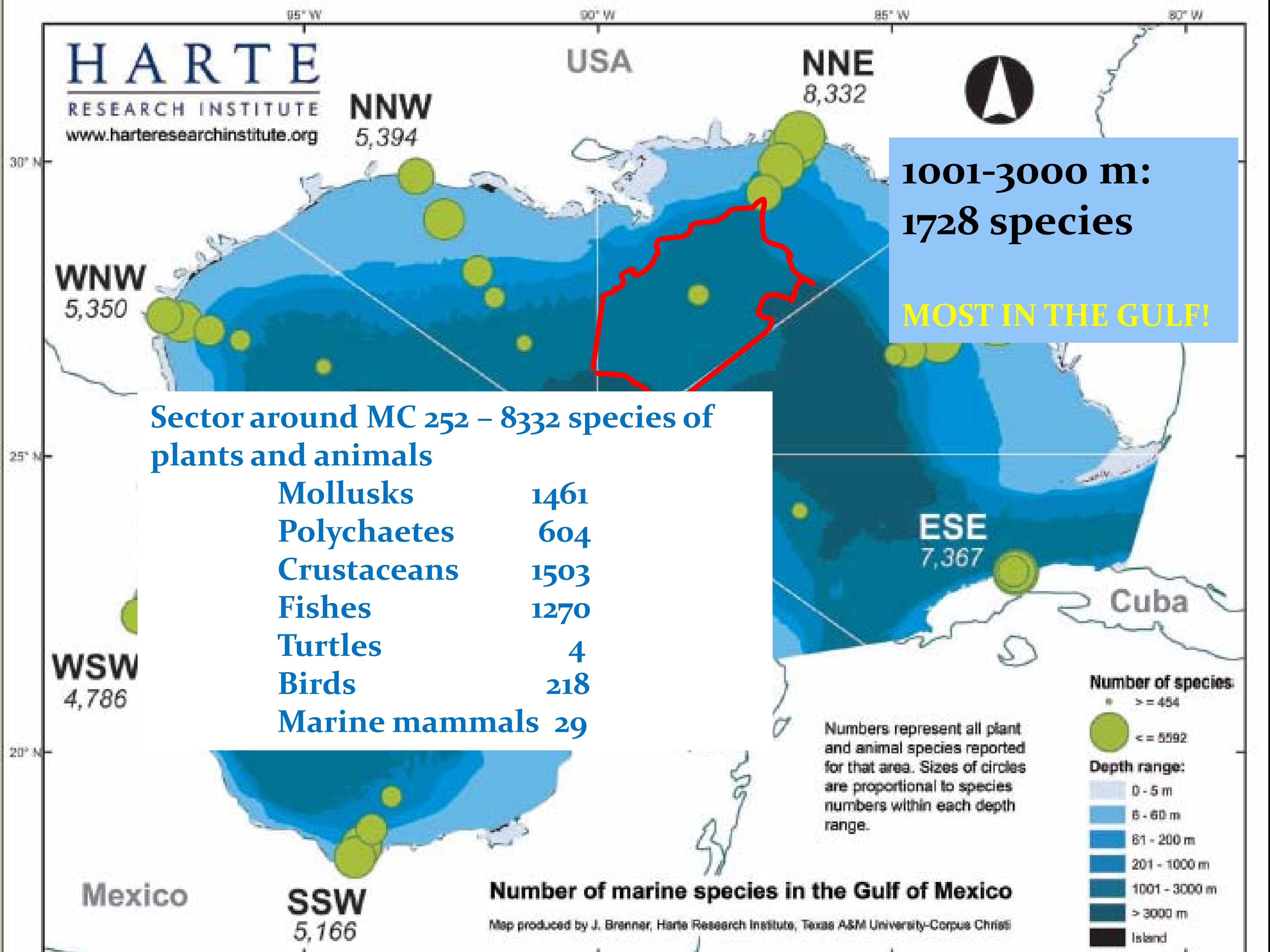
USA
NNE
8,332
NNW
5,394
WNW
5,350
ENE
8,484
ESE
7,367
Cuba
WSW
4,786
SSE
6,062
SSW
5,166
Mexico
Number of species
>= 454
<= 5592
Depth range:
0 - 5 m
6 - 60 m
61 - 200 m
201 - 1000 m
1001 - 3000 m
> 3000 m
Island
Numbers represent all plant and animal species reported for that area. Sizes of circles are proportional to species numbers within each depth range.
Number of marine species in the Gulf of Mexico
Map produced by J. Brenner, Harte Research Institute, Texas A&M University-Corpus Christi

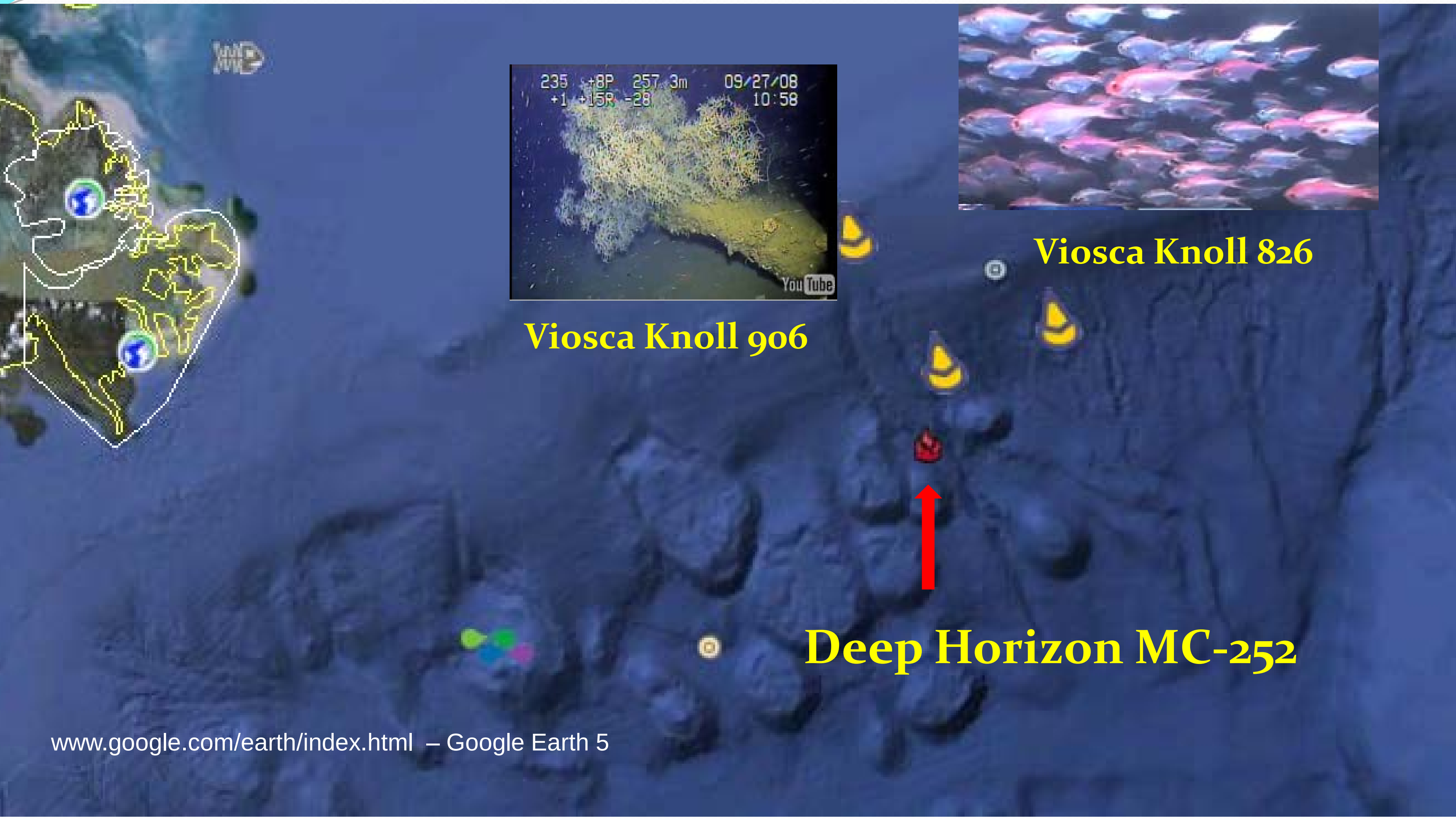


1001-3000 m: 1728 species

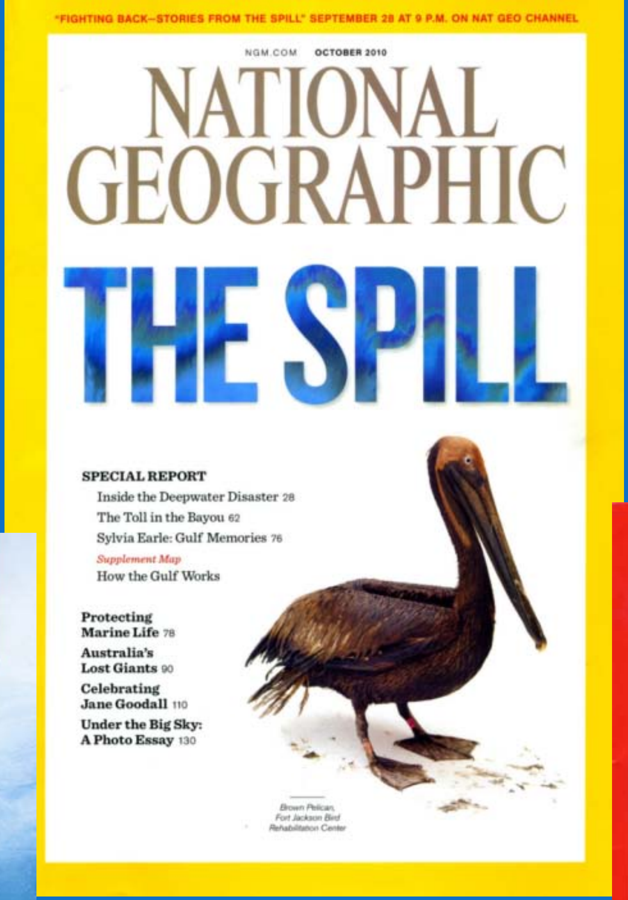
MOST IN THE GULF!

Sector around MC 252 – 8332 species of plants and animals

Mollusks	1461
Polychaetes	604
Crustaceans	1503
Fishes	1270
Turtles	4
Birds	218
Marine mammals	29



Complex habitats exist around the well site


"FIGHTING BACK—STORIES FROM THE SPILL" SEPTEMBER 28 AT 9 P.M. ON NAT GEO CHANNEL
NGM.COM OCTOBER 2010
NATIONAL GEOGRAPHIC
THE SPILL
SPECIAL REPORT
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Celebrating Jane Goodall 110
Under the Big Sky: A Photo Essay 130
Brown Pelican, Fort Jackson Bird Rehabilitation Center


THE GAZA FALLOUT • IRAN, ONE YEAR LATER • AN UMP'S BAD CALL
JUNE 14, 2010
Newsweek
WHAT THE SPILL WILL KILL
SHARON BEGLEY, DANIEL GROSS, AND JONATHAN ALTER:
THE ENVIRONMENTAL, ECONOMIC, & POLITICAL TOLL


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TIME
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What the disaster in the Gulf means for the future of energy
BY BRYAN WALSH
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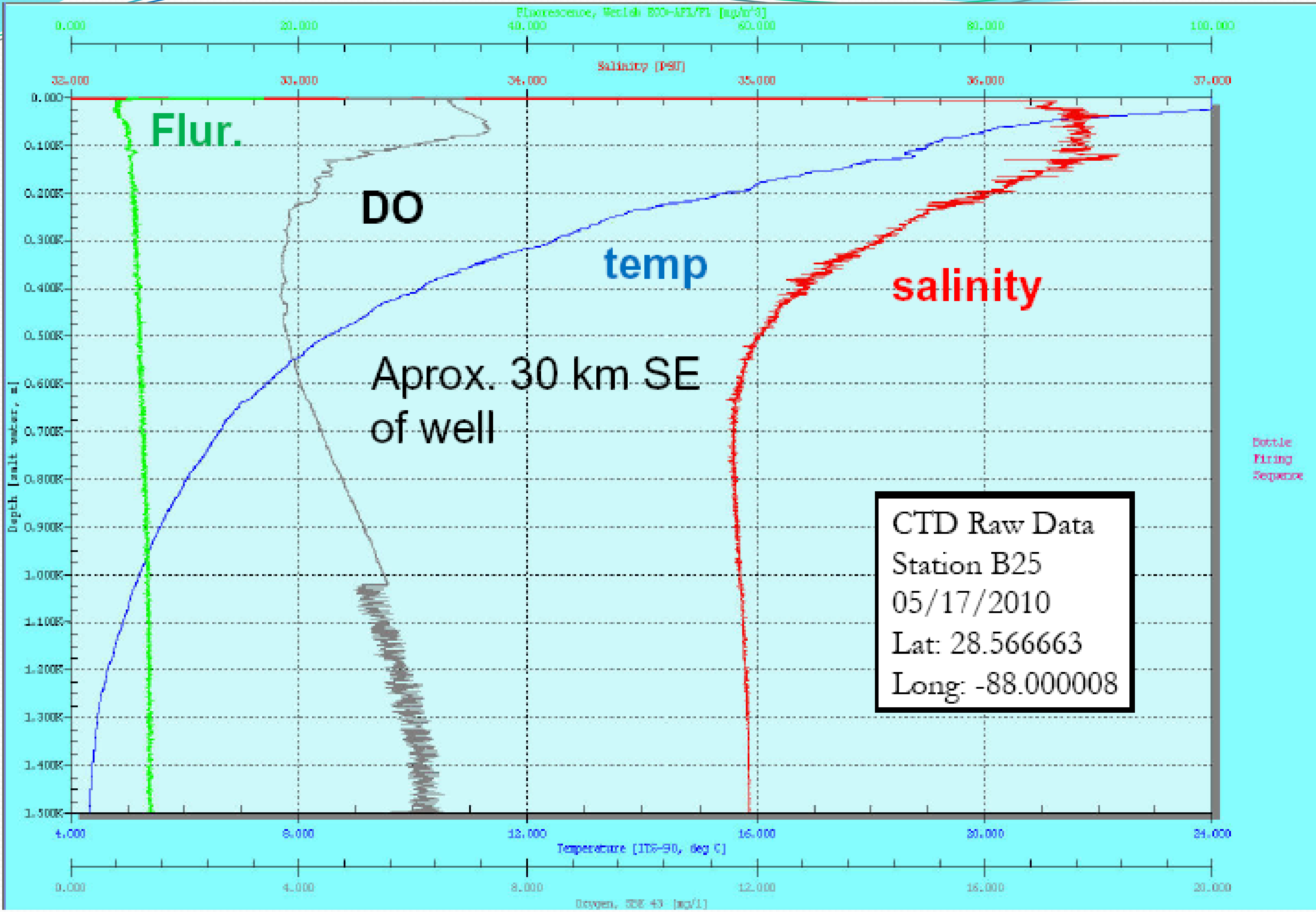
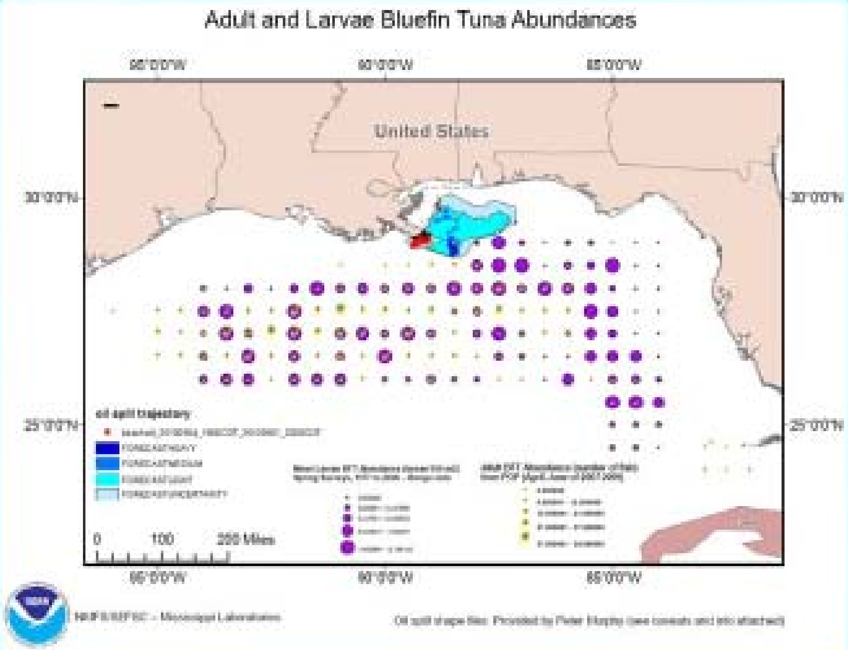
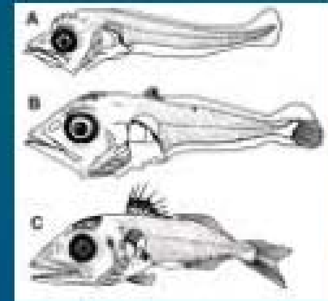
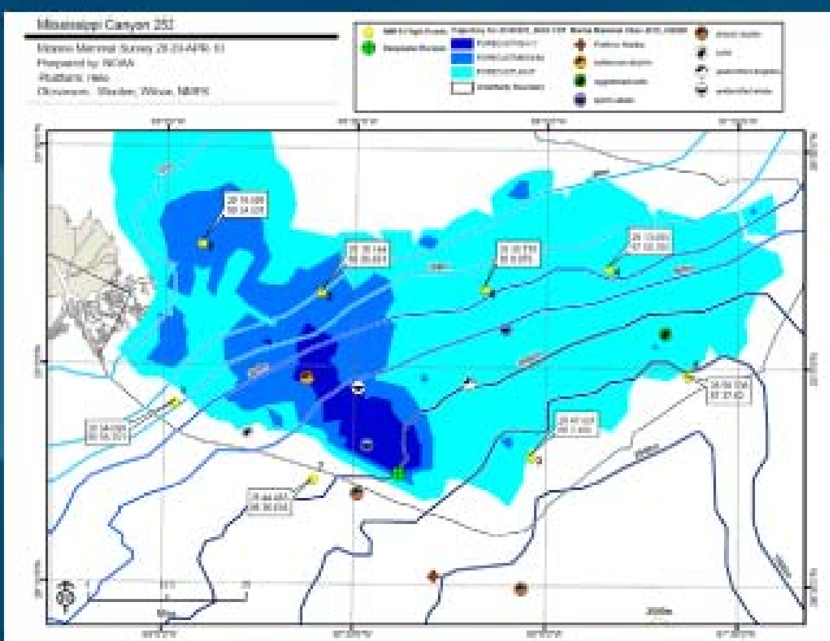


Flur.
DO
temp
salinity
Aprox. 30 km SE
of well
CTD Raw Data
Station B25
05/17/2010
Lat: 28.566663
Long: -88.000008
Salinity [PSU]
Temperature [ITS-90, deg C]
Depth [salt water, m]
Bottle
Firing
Sequence



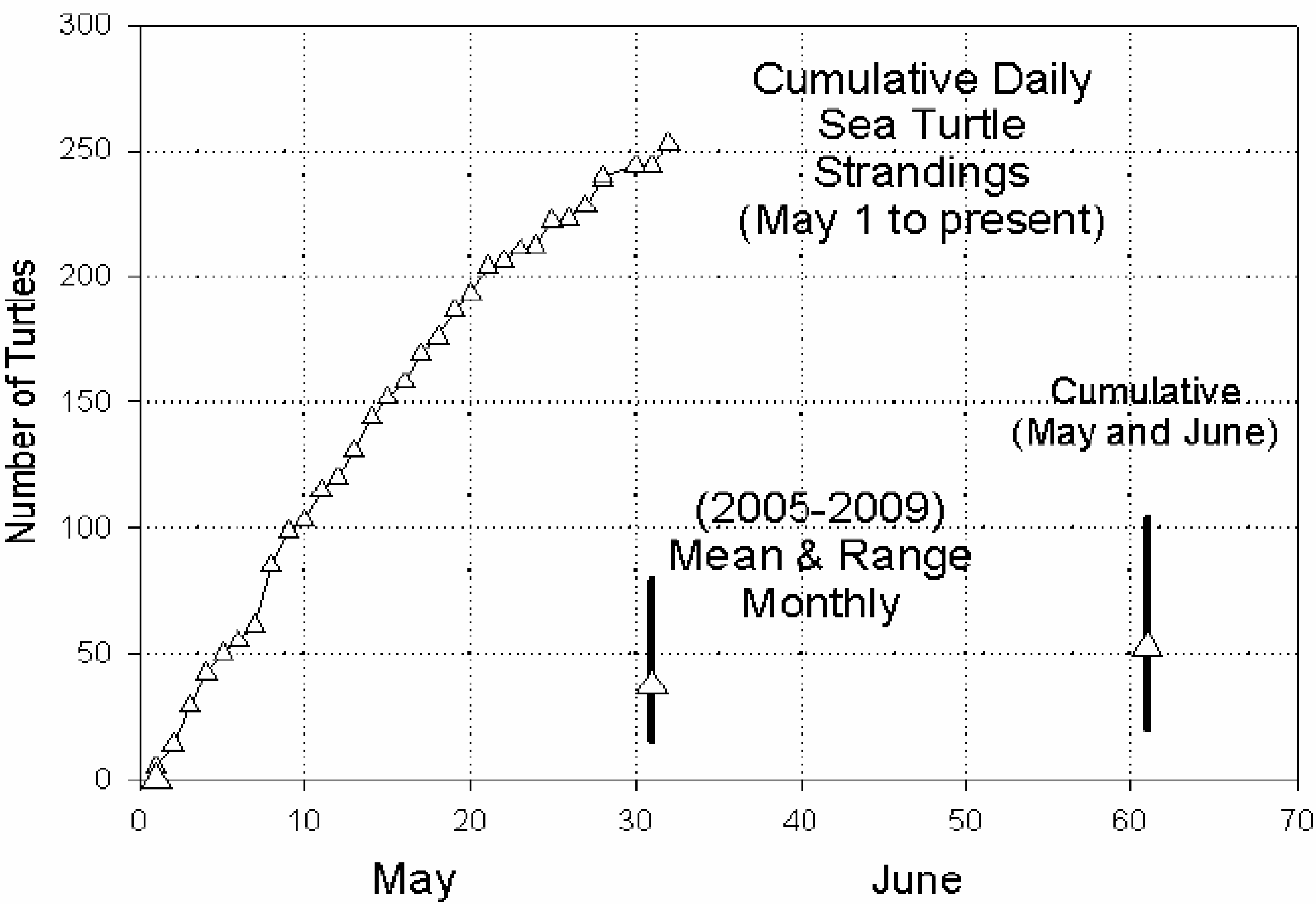


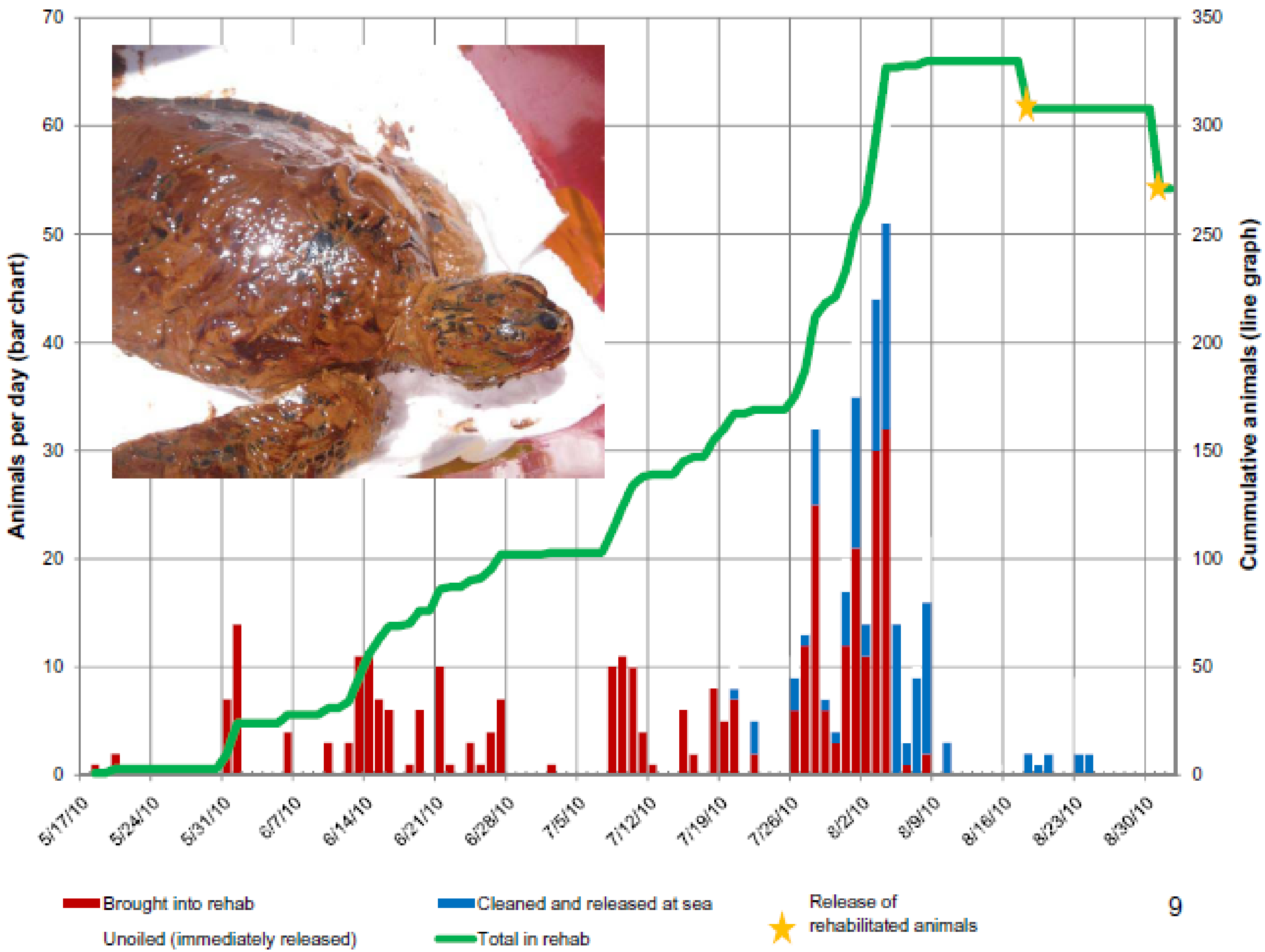


Deep water giant squid

- What living resources are potentially at risk from the oil and use of dispersants and their synergy?
- BFT spawning in the region offshore from the spill from April-June – NOAA FSV GORDON GUNTER cruise completed
- Samples of sperm whale tissue and squids available from cruise last summer and winter as baselines
- Overflights continue to monitor protected species

Protected Resources a Major Concern





S. Murawski, NOAA, 16Sept10