**Fisheries Oceanography during the Deepwater Horizon oil spill**

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During May-June 2010, while oil was still flowing from the Macondo well following the Deepwater Horizon platform explosion on April 20, 2010, drifter trajectories, satellite observations, and numerical simulations indicated a potential for direct connectivity between the northern Gulf of Mexico (GOM) and the Florida Straits via the Loop Current (LC) system. This pathway could have potentially entrained particles, including northern Gulf contaminants related to the oil spill, carrying them directly towards the coastal ecosystems of south Florida and northern Cuba. To assess this connectivity, and to evaluate the potential oil impacts on economically important GOM fisheries, NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML) and Southeast Fisheries Science Center (SEFSC) conducted an interdisciplinary shipboard survey in the eastern Gulf during July 2010. Results regarding the physical connectivity observed during the cruise and the search for oil were recently published in Continental Shelf Research (December, 2013). Researchers found that by July 2010 a large Loop Current Ring had become separated from the main LC by a cyclonic eddy resulting in the loss of a direct transport mechanism from the northern GOM to the Florida Straits, leaving only indirect pathways available to potential contaminants, and with the exception of four hydrographic stations occupied within 84 km of the wellhead, there was no evidence of oil observed across the broader survey region on the surface or within the water column. Sorting and identifying the 24,374 larval fish collected during the survey has taken longer to complete than the analysis of the physical data. This task is being performed by colleagues at ECOSUR in Mexico. Presently, more than 60% of the larvae have been identified, and all samples should be identified by the end of 2014. Some families with the highest relative abundances include Carangidae, Scombridae, and Myctophidae.

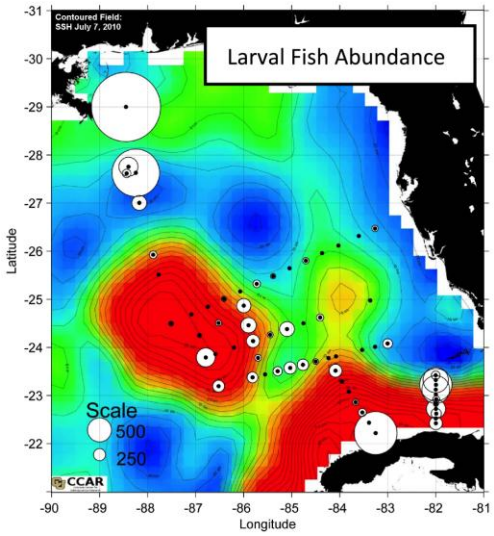


Figure: Larval fish abundance of the 60% of identified samples collected during the July 2010 collaborative survey. Abundance is plotted overtop of a contoured sea surface height field produced for July 7, 2010, the midpoint of the cruise.