



Distribution of pelagic fish eggs off the Senegalese Coast during an intense upwelling event in March 2014

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Abstract

The upwelling ecosystem off the coast of Senegal is highly productive and usually dominated in biomass by *Sardinella aurita*. During the AWA cruise in March of 2014 (F/RV Thalassa off Mauritania, Senegal, and the Gambia) continuous egg samples were collected onboard with a CUFES (Continuous Underwater Fish Eggs Sampler). Laboratory analysis of these samples show that very few eggs collected had a size corresponding to *S. aurita* eggs. Instead, a large part of the eggs collected could be identified as *Engraulis encrasicolus*, *Sardina pilchardus*, or *Diplodus bellottii*. As of now, no data is available on spawning behavior and locations of these species in Senegalese waters. Additionally, the coastline (20 m isobath) South-East of Dakar was repeatedly sampled. The obtained results not only indicate a southward migration of *S. pilchardus* down to at least 14°30' N, when compared to data from the early 1980s, but also pose as a proof for continuous spawning activity of *S. pilchardus* and *E. encrasicolus* in the area South-East of Dakar. We suggest that the very intense upwelling event that occurred during the cruise was responsible for the spawning event of *S. pilchardus*, and *E. encrasicolus* and also for the absence of *S. aurita* eggs. Finally, it is highlighted that, especially for *D. Bellotii*, the highest egg densities were found very near the planned Dakar city wastewater emissary off Mbao (South coast of Senegal).

Keywords: Continuous Underwater Fish Eggs Sampler, CUFES, clupeidae, Senegal.



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