Department of Oceanography
Naval Postgraduate School
Monterey, CA 93943-5000

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Oceanography Seminar

SPEAKER
John Ryan, PhD
AFFILIATION:
Monterey Bay Aquarium Research Institute
TITLE:
A red tide incubator in the upwelling shadow of Monterey Bay
DATE:
Wednesday, April 25, 2007
TIME:
12:00 PM
PLACE:
Spanagel Hall, Rm 316
ABSTRACT:

Dense accumulations of certain phytoplankton cause the ocean to appear reddish. Some of these "red tides" can harm marine life and people. Dinoflagellates comprise half of all red tide species and three quarters of all Harmful Algal Bloom (HAB) species. Thus, dinoflagellate ecology research is essential to advancing our understanding red tide and HAB phenomena. This talk with explore aspects of dinoflagellate ecology in Monterey Bay. Remote sensing and in situ observations indicate the existence of a red tide incubator in the upwelling shadow of northern Monterey Bay. Dense surface aggregations of dinoflagellates are observed in this region, primarily during the oceanic period (August-October). Transport of these populations can rapidly spread red tide blooms throughout the bay. Remote sensing data show that the upwelling shadow is important to not only bloom initiation, but also retention. Combining multidisciplinary observations from satellite, aircraft, AUV, towed vehicle, and moorings, I will present evidence for the existence of a red tide incubator in Monterey Bay, illustrate how bay-wide red tides can rapidly develop, and examine relevant natural and anthropogenic factors of the hypothesized incubator region.