

## **CENTRO INTERDISCIPLINARIO DE CIENCIAS MARINAS**



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## Dynamics of a *Prorocentrum minimum* bloom along the northern coast of Sinaloa, México

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To investigate the relative importance of mesoscale physical events, such as upwellings and physical and chemical variables during an algae bloom of *Prorocentrum minimum*, 25 sampling sites were established offshore of the Navachiste Lagoon Complex on the east side of the Gulf of California. Simples were analyzed for phytoplankton concentration, water chemistry, and temperature during November 1999, January, March, April, May, and August 2000. Satellite imagery of sea surface temperature (SST) for April 2000 was processed to obtain a synoptic view of the area during the extraordinary bloom of *P. minimum* in the open waters of the Gulf of California. The bloom was associated with change of oceanographic conditions from moderate winds to calm period, temperature increase and high nitrate (NO<sup>3</sup>-N) and ammonia (NH<sup>+</sup><sub>4</sub> -N) content in the offshore waters. Depletion of these nutrients during the bloom suggests that this species uses both types of nitrogen substrates. Cysts in the northernmost sampling stations in January and March indicate that upwelling water, rich in nitrates, also carried a seed stock population of *P. minimum*. SST patterns in the satellite imagery suggest wind-forcing as the responsible mechanisms triggering the algal bloom offshore of the Navachiste Lagoon Complex

Palabras clave: Specialist, Prorocentrum minimum, Nutrients, Mahogany tide, Algal bloom, satellite images

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