

DISTRIBUTION OF MARINE PHYTOPLANKTON ALONG THE COAST OF RANONG PROVINCE, THAILAND

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ABSTRACT: The present study investigated the distribution and composition of marine phytoplankton along the western coast of Ranong Province, Thailand. Sampling was conducted from January to April 2018, covering various regions of interest along the coast. The phytoplankton community was characterized using taxonomic identification and abundance analysis. A total of 144 diatom species belonging to 66 genera, and 55 species of coastal dinoflagellates belonging to 21 genera, were identified. The dominant diatom genera were *Chaetoceros*, *Rhizosolenia*, and *Hemiaulus*, while the most diverse genus among dinoflagellates was *Ceratium*. The abundance of diatoms ranged from 620 to 319,783 cells L⁻¹, with the highest mean abundance observed in February. Dinoflagellate densities varied from 32 to 2,108 cells L⁻¹, with the highest abundance recorded at the southern part of the coast in April. Cluster analysis revealed distinct temporal and spatial patterns in phytoplankton abundance, with specific stations exhibiting higher or lower abundances. The hydrographic factors, such as salinity, water temperature, pH, dissolved oxygen, and total suspended solids, showed varying ranges and distributions across the sampling sites. The findings of this study provide valuable insights into the taxonomic composition, abundance dynamics, and hydrographic factors influencing the distribution of coastal phytoplankton in the study area. This information contributes to a better understanding of the ecological dynamics and productivity of marine ecosystems, emphasizing the importance of continued monitoring and management of coastal waters in Ranong Province, Thailand.

Keywords: marine phytoplankton, Ranong Province