

Distribution of living coccolithophores in the marginal and inland seas in the Philippine Archipelago

Jaan Ruy Conrad P. Nogot

University of the Philippines, National Institute of Geological Sciences, Diliman, Quezon City, Philippines, 1101; jrcnogot@gmail.com

Alyssa M. Peleo-Alampay

University of the Philippines, National Institute of Geological Sciences, Diliman, Quezon City, Philippines, 1101; ampeleoalampay@up.edu.ph

Dorothy Joyce Marquez

University of the Philippines, National Institute of Geological Sciences, Diliman, Quezon City, Philippines, 1101; ddmarquez@up.edu.ph

Allan Gil S. Fernando

University of the Philippines, National Institute of Geological Sciences, Diliman, Quezon City, Philippines, 1101; agsfernando@yahoo.com, asfernando@up.edu.ph

Forty-six coccolithophore species, including 10 variants and one species described for the first time, were identified from 61 water samples that were collected from various marginal and inland seas of the Philippines. Coccolithophore abundance in the marginal and inland seas, including coastal waters, is remarkably low (<1000 coccolithophores/l). Generally, coccolithophores in this region were subordinate to diatoms in the phytoplankton population. The present study reveals hydrographic controls on the distribution of coccolithophores within the inland seas of the Philippines. The more abundant and diverse coccolithophore communities in the inland seas were often

recognized off areas less affected by monsoon-enhanced jets, but in proximity to a cyclonic eddy (upwelling feature). *Gephyrocapsa oceanica* dominated the surface assemblage, especially in inland seas, whereas *Discosphaera tubifera* and *Umbellosphaera irregularis* dominated the offshore surface assemblage in the Philippine Sea. The flora in the deep chlorophyll maximum (DCM) in nearshore stations was primarily composed of *Florisphaera profunda*, although *Oolithotus antillarum* was found to flourish within the Mindanao Eddy in the Philippine Sea. Coccolithophores with dissolved features occurred frequently throughout the study area.