

**HABITAT- TYPE AND TEMPORAL COMPARISON OF THE MEIOBENTHIC
COMPOSITION OF TAKLONG ISLAND NATIONAL MARINE RESERVE**

An Undergraduate Special Problem

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By:

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Abstract of Special Problem titled

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Meiofauna are very important indicators of human disturbances in the natural ecosystem. It plays a major role in the primary production, rapid nutrient cycling and other benthic chemical processes. Knowledge regarding marine benthic communities is scarce and is limited only to temperate regions. Moreover, only a few have been conducted in the Philippines, while no studies have been conducted in the Taklong Island National Marine Reserve, Nueva Valencia, Guimaras, so this serves as the baseline for further studies to be conducted in the place. This study provides a characterization of the spatial and temporal distribution of meiobenthic fauna in the Taklong Island National Marine Reserve. Specifically, the study aimed to compare the composition of meiobenthic infauna in different habitat types and to examine changes in their abundance and distribution from 4, 16 and 26 weeks after the oil spill.

Meiobenthic samples were collected in Taklong Island National Marine Reserve during the Rapid and Monitoring Phases of the Benthos Project of the UPV Oil Spill Response Program. Surveys were conducted in September 2 and November 23, 2006 and February 9 2007, respectively 4, 16 and 26 weeks after the spill. Nine stations within the area were chosen based on the station grid for the biological surveys.

A total of 20 taxa were identified, with nematodes being numerically dominant. It also showed the highest mean abundance in all the sampling period and for the entire habitat type. The over all mean density was (80276.71494 ind. m², SD =19988.37), with the highest peak in February 2007 which is 26 weeks after the oil spill (143,508.4 ind/m²). And the lowest density was recorded in the month of September 2006, 4 weeks after the oil spill (47,205.43 ind. m²). For the habitat type soft bottom has the highest recorded mean density in the entire sampling period. For the temporal variation food source, organic matter and temperature dictates the changes in distribution of meiofauna but in the study it mostly because of the oil spill happened before the sampling period.