

Pitsada Rungruangthongthavee 2014: The Assessment of Species and Abundance of Sessile benthic organisms on the EX-HTMS Sattakut, Koh Tao, Surat Thani Province. Master of Science (Marine Science), Major Field: Marine Science, Department of Marine Science. Thesis Advisor: Assistant Professor Thon Thamrongnawasawat, Ph.D. 145 pages.

The aim of this research was to monitor the variation and abundance of sessile benthic organism species on the HTMS Sattakut, comparison by depth, light, sediment factor and species of sessile benthic organism between HTMS Sattakut and HTMS Prab. Focusing on the sample by photo quadrats and line transect technique with both random and fixed formative data; to study distribution, variation of species and their abundance. The results, from September 2011 to January 2014, showed that 13 species (4 phylums). The number of species and quantity of sessile benthic organisms have been increasing. By considering sessile benthic organisms on HTMS Sattakut. The ecological succession of these organisms were divided into 3 stages. The first stages, bryozoas, oysters and black coral were founding. The second stage, we founded sponge sea whip and coral. And the third, the quantity of sessile benthic organism in second stage have been increasing. Reporting of MANOVA analysis showed the significant difference in depth, light and sediment ($p < 0.05$). The beginning with depth The dominant species were founding in a difference depth, at 18 metre depth, we founded *Platygyra* sp. and *Mycale (Zygomycale)* sp.), at 22 metre depth, *Lithophyllon* sp. has been found and *Antipathes* sp. was founding at 25 metre depth. Then by Light factor, the dominant species is *Cycloseris* sp. were founded at shining area and *Antipathes* sp. had been found in the darken area. Lastly by Sediment factor, the dominant species is *Cycloseris* sp. were founded at sediment area and *Schizoporella* sp. were founded at no sediment area. In summary, after comparison between 2 wrecks in January 2014, 23 species (6 phylums) were found at HTMS Sattakut and 25 species (7 phylums) were found at HTMS Prab, species of sessile benthic organism were not statistically difference between 2 wrecks ($p > 0.05$). As above, this research can be used as a guide to lay man-made dive site with a functioning ecosystem.

Student's signature

Thesis Advisor's signature