# Plankton diversity at Mu Ko Thale Tai, Nakhon Si Thammarat Province

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The present study aimed to examine plankton species diversity along Khanom Canal, Had Khanom, Mu Ko Thale Tai, Nakhon Si Thammarat Province. Sampling was carried out covering 15 stations starting from Cho Waterfall to Khanom Canal and around five islands of Mu Ko Thale Tai (Wang Nok, Wang Nai, Rap, Tan and Mudsum) during October 2006 and September 2007. A total of 184 phytoplankton taxa in three Divisions was recorded. The most diverse Division was Chromophyta, comprising of Class Bacillariophyceae with 41 genera (104 taxa), Class Dinophyceae 17 genera (51 taxa), and Class Dictyochophyceae 1 genus (2 taxa). Moreover, *Bacteriastrum* sp1, *Chaetoceros diversus* and *Chaetoceros lorenzianus* were the most frequently found taxa throughout the sampling periods. Based on density, *Bacteriastrum* sp1 dominated the phytoplankton of all stations sampled throughout the sampling periods ($7.27x10^7$ cells/l). This species had the highest density in March 2007 ($1.17x10^6 \pm 2.21x10^6$ cells/l) followed by October 2006 ($8.80x10^5 \pm 1.28x10^6$ cells/l) and September 2007 ($8.68x10^5 \pm 6.24x10^5$ cells/l). Moreover, 61 taxa in 11 phyla of zooplankton were recorded. Arthropoda was the most diverse phylum, comprising 24 taxa, of which nineteen were the members of the Copepoda. Based on density, nauplii of crustaceans dominated the zooplankton at all stations over the sampling period (1316.67-5293.02 ind./l). They showed the highest density in January (5,297±8387 ind./l), March (4,662±6,315 ind./l) and September 2007 (3,437±4,279 ind./l). Besides the nauplii of crustaceans, *Tintinnopsis orientalis* and *Codonellopsis ostenfeldi* also showed high densities at all times during the sampling periods.