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KEY WORDS : RELATIONSHIP/ AQUATIC PLANTS /SEDIMENT /  
THALE NOI/ PHATTHALUNG

JUTIPORN SIWAYAWIROJ:THE STUDY ON THE RELATIONSHIP  
BETWEEN AQUATIC PLANTS WITH SOME CHARACTERISTICS OF  
SEDIMENT AND WATER QUALITY AT THALE NOI LAGOON,  
PHATTHALUNG PROVINCE. THESIS ADVISOR: SURA PATTANAKIAT,  
M.Sc., CHUMLONG ARUNERTAREE, Ph.D., CHARLIE NAVANUGRAHA,  
Ph.D., PRASOPCHAI NAMLABUDHA, B.Sc. 149 p. ISBN 974-664-259-6.

This study using air photo and LANDSAT TM imagery, identified the  
plant community of Thale Noi into 14 zones.

It was found the total aquatic plants of 20 species, 19 genuses and  
15 families, included 7 submerged, 5 emerged, 4 floating and 4 marginal  
species. The dominant species was *Eleocharis dulcis*. The number of species  
and density within the rainy season were higher compared with the dry season.  
The fertility of sediment was suited for aquatic plant growth showing the  
properties of clay particle, non clearly defined separated from organic matter.  
The organic matter was about 9.81 %, pH 8.4, total nitrogen 0.45 %,  
available phosphorus 0.536 ppm., available potassium 0.908 ppm., electrical  
conductivity 1.78 mmhos/cm. and cation exchange capacity 27.15 me/100g.  
Water qualities of Thale Noi included average temperature of 28.72 °C, 1.66  
m. depth, 1.09 m. transparency, 7.13 pH, 5.38 mg/l. dissolved oxygen, 41.82  
mg/l. total dissolved solids, 5.87 mg/l. total suspended solid and 0.782 mg/l.  
nitrate.

The properties of sediment were significantly related to aquatic plants at  
the level of 0.05 or 0.01. In rainy season at least one characteristic of  
sediment and aquatic plants was significantly related except for pH value,  
while in the dry season, significantly related parameter were included sand, silt  
and clay particles, pH, available phosphorus and available potassium. The water  
qualities were significantly related with aquatic plants at the level of 0.05 or  
0.01. They included temperature, depth, pH, dissolved oxygen, total dissolved  
solids and nitrate for dry season while the rainy season at least one  
characteristic of water qualities was significantly related with aquatic plants.