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JINTANA KROMNOY : SOME PHYSICAL AND CHEMICAL PROPERTIES OF MANGROVE SOILS, CHANGWAT PHANG-NGA. THESIS ADVISOR : ASSO. PROF. GULLAYA WATTAYAKORN, Ph.D., 163 PP. ISBN 974-584-332-6

Some physical and chemical properties of mangrove soils in Changwat Phang-nga were investigated. Soil samples were collected from Klong Panyee, undisturbed natural mangrove forest along the Klong and several abandoned tin mining sites in Changwat Phang-nga. In Klong Panyee, sediments were found to be mainly sandy clay loam. Sediment acidity was slightly acidic. Organic matter and nitrogen contents were higher at the upper part of the Klong as compared to the mouth of the Klong. Phosphorus, potassium, sodium, calcium, magnesium, and cation exchange capacity, however, were found to be higher at the mouth of the Klong.

In natural mangrove forest, the soils at the upper part of the Klong Panyee was mainly clay loam, whereas in the middle part was silty clay, and sandy clay loam at the mouth. Bulk density and nitrite nitrogen were similar in all areas. Other physical and chemical properties, such as organic matter, nitrate nitrogen, ammonia nitrogen, organic nitrogen, phosphorus, potassium, sodium, calcium, magnesium, electrical conductivity, and cation exchange capacity were significantly ($\alpha = 0.05$) higher at the mouth of the Klong than the middle and upper parts of Klong Panyee.

Soil type in area where Rhizophora apiculata, Rhizophora mucronata, Avicennia spp., Xylocarpus spp., Ceriops tagal and Bruguiera spp. were found is principally clay loam; whereas Sonneratia spp. was found in sandy clay loam soils. Physical and chemical properties, such as soil acidity, bulk density, organic matter, nitrogen, phosphorus, potassium, sodium, calcium, magnesium, electrical conductivity, and cation exchange capacity were similar in all areas. Levels of sand, bulk density and soil acidity were significantly higher, whereas nutrient concentrations were significantly lower ($\alpha = 0.05$) at the mining sites than the natural mangrove forest area.