

The distribution of riparian corridor plants and the relations with river water salinity along Perai River, Penang, Malaysia

ABSTRACT

Ecological surveys were carried out to investigate the distribution and characterization of riparian corridor plants along the Perai River, Penang, Malaysia from July 2007 to March 2008. Surveys were design to represent horizon-tal sections of the river starting from the river mouth towards the upper reaches for 20 km. A total of 84 species of plants from 30 families were recorded. They consisted of 28 species of standing plants (plants with height of more than 1 m) and 56 species of weedy plants (plants with height of less than 1 m). Standing plants consisted of ferns, palms, herbs, shrubs and mangroves while weedy plants comprised of aroids, grasses, sedges and broad leaf weed. Species abundance and dominance for each zone were relatively different. Dominant species was determined using Important Species Index (ISI). Based on ISI, the important species of standing plants were *Sonneratia alba*, *Acrostichum aureum*, *Nypa fruticans*, *Avicennia marina*, *Rhizophora apiculata*, *Acrostichum speciosum* and *Rhizophora mucronata*. Weedy plants were dominated by *Mikania micrantha*, *Cryptocoryne ciliata*, *Wedelia trilobata* and *Asystasia intrusa*. The distribution of the corridor plant species was closely related to the pattern of river water salinity measurements. The distribution of mangrove species with tolerance and adaptation to seawater appeared as follows: *Avicennia marina*, *Rhizophora apiculata*, *Rhizophora mucronata*, *Sonneratia alba*, *Nypa fruticans*, *Acrostichum aureum* and *Acrostichum speciosum*.

Keyword: Riparian corridor plants; Mangrove species; Weedy species; River estuary; Malaysia