

CHAPTER 2

2. STUDY AREA AND STATIONS

This study was carried out in the Kapar Forest Reserve, Selangor (latitude 101° 20'E and longitude 3° 05'N), situated 10 km north of Port Klang on the west coast of Peninsular Malaysia (Fig. 1). The forest was bordered by the Straits of Malacca on the western side and on the eastern side by a bund which prevents sea water from intruding into reclaimed land. Starting at the seaward edge, the forest can be subdivided into three distinct zones:

- (1) an *Avicennia* zone, comprising exclusively of *Avicennia alba*.
- (2) a *Sonneratia* zone, with *Sonneratia alba* intermingled with *Avicennia alba*; and
- (3) a mixed forest zone on the high shore near the bund, predominantly comprised of *Bruguiera parviflora* and *Rhizophora mucronata*.

Three creeks in mangrove inlet, Sungai Sementa Kecil (SSK) were selected. The creek banks were colonized by mangrove vegetation. Trees were about 15 meters in height. The canopy was moderately dense and sunlight penetrated to the creek floor. On the forefront of each bank's side was the mudflat area. This area was very inaccessible. The substratum was extremely soft and muddy. All sites were

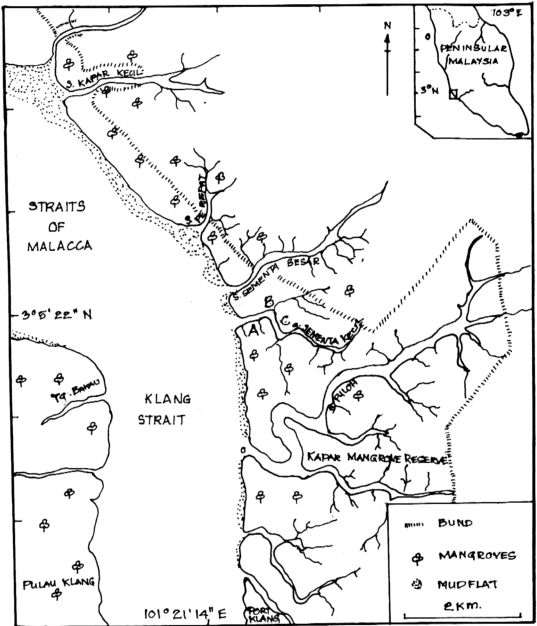


Figure 1.0 : Map of study sites in Kapar Mangrove Forest Reserve. The study sites are denoted as A (Site I), B (Site II) and C (Site III).

exposed at low tide and inundated by high tides of different heights during sampling. Tides in Port Klang are predominantly semi-diurnal, i.e there are two low and two high tides of different heights each day with spring and neap periods per lunar month (Sasekumar, 1974).

Site one (I) is a creek of 17.2 meters in length. The banks of the creek were colonized dominantly by *Rhizophora mucronata* Lamk. The right side of the creek was occupied by a pure stand of *Avicennia alba* which has average height of about 10 meters (Plate 1). The substratum were extremely soft and waterlogged. *Avicennia alba* is easily detected by the characteristic white color on the underside of the leaf. Branches and stems may be straight or slightly crooked. This vegetation has the 'stilt root' that grows out from the base of *Avicennia* tree. *Avicennia alba* also have pencil-like pneumatophores which arise from underground cable roots.

Site two (II) refers to the creek near the middle reaches of SSK (Plate 2). It was forested predominantly by tall *Rhizophora mucronata* Lamk (20 meters in height). This site was sampled for three months. The substratum here is very muddy and is inundated by tides almost daily. *Rhizophora mucronata* has a straight stem with dark grey color. Leaves are elongated and have sharp pointed ends. *Rhizophora* zone has tangled stilt roots which may arise



Plate 1 : A view of the small creek (Site I) at low tide in Sungai Sementa Kecil.



Plate II : A view of the small creek (Site II) at low tide in Sungai Sementa Kecil.



Plate III : A view of the small creek (Site III) at low tide in Sungai Sementa Kecil.