Taxonomy, Distribution and Economic Importance of *Xylocarpus* species at Carey Island – The Heritage Island of Malaysia

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**Abstract**  
The genus *Xylocarpus*, belonging to the family Meliaceae is distributed in the tropics including mangrove habitat from Africa to Australia, Malaysia and India (Ridley, 1922). It is usually associated with *Avicennia*, *Excoecaria*, *Acanthus*, *Rhizophora*, *Bruguiera*, *Sonneratia*, *Nypa* and *Ceriops*. There are three species of *Xylocarpus* in Malaysia namely, *Xylocarpus granatum*, *X. mollucensis* and *X. rumpfit*. They are considered important endangered mangrove species in Malaysia. *X. granatum*, commonly known as *nytreh bunga*, is important economically for wood carving. The inner bark is a source of dye for tanning, the oil from seeds is used for grooming hair, the fruits and seeds are used to treat diarrhea, and a bark decoction for cholera. It has been mentioned as the best and most beautiful cabinet wood. Its fine, glossy texture is suitable for furniture (Burkill, 1966; Primavera *et al.*, 2004). However, the population of the species is dwindling hence there is an urgent need to conserve the species. To date, there is no record on detailed morphological study of the species therefore it is one of the aims of the study to investigate the morphological characteristics of the species. Anatomical studies on the leaf were also carried out. Scanning electron microscope study revealed the presence of sunken, anomocytic-type stomata on the abaxial surface of the leaf. Results from anatomical studies showed the presence of thick cuticle on both abaxial and adaxial surface of the leaf. Sunken stomata and thick cuticle are adaptations of mangrove species to reduce transpiration. Tannin cells were also observed in the leaf lamina. Regeneration of this species from tissue culture had been attempted, however, only callus formation was observed.

**INTRODUCTION**

Carey Island is situated in the North-West of Morib, Selangor, across the sea from Port Klang, Malaysia (figs 1&2). It is a huge island with a total area of 15,000 ha and comprised largely of palm oil estate belonging to Sime Darby Plantation, a leading plantation development group in Malaysia. It is an initial settlement area for the Mah Meri, one of the aborigine tribe of Malaysia. The tribe is renowned for their woodcarving, using the wood of *Xylocarpus* species. On Carey Island, the development is geared towards a model region where past and special attributes of the landscape are coupled into the unfolding development with special emphasis on