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SHORT COMMUNIAION

## Diversity of mangrove plants in the coastal eco- system of Tamil Nadu

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### ABSTRACT

*Mangroves are the world's most productive coastal ecosystems. In Tamil Nadu, the Pichavaram mangrove forest has a wide range of mangrove species. Pichavaram, and T.S. Pettai were all part of the survey in the Pichavaram mangrove forest. During the study period, a total of 20 species were identified, including 10 mangroves and 10 mangrove-associated plants. In the Pichavaram mangrove forest, Avicennia and Rhizophora species were determined to be the major species. Suaeda maritima, Suaeda monoica, Ipomoea pes-caprae, and Sesuvium portulacastrum were determined to be the main companion species. Xylocarpus mekongensis is a critically endangered species that has only been found in a few locations. The findings of this research will be used to establish adaptive management techniques in anticipation of sea-level rise, identify conservation priorities, and monitor deforestation and forest degradation.*

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### INTRODUCTION

The Pichavaram mangrove forest encompasses an area of around 1100 acres, with forest covering 50%, waterways covering 40%, and sand and mudflats covering the remaining 20%. (Krishnamurthy and Prince Jayaseelan, 1983). The Pichavaram mangrove is influenced by the mixing of three types of waters: 1. Neritic or coastal water from the adjacent Bay of Bengal through a mouth known as 'Chinnavaikkal,' 2. Brackish water from the Vellar and

Coleroon estuaries, and 3. fresh water from an irrigation canal (Khan Sahib canal) as well as the main channel of the Coleroon river.

## MATERIALS AND METHODS

### Survey areas

The Pichavaram mangrove forest (Lat. 11.20 N; Long. 79.470 E) is located near Chidambaram, Tamil Nadu, between the Vellar and Coleroon estuaries. The forest is found on 51 islets ranging in size from 1100 ha that connect the Vellar and Coleroon estuaries via complicated canals.

### Collection of data

In Killai, T.S.Pettai, and Pichavaram, mangroves and mangrove-associated plants were first identified and documented. The mangroves and mangrove-associated vegetations that exist around the study region were investigated for identification in order to assess the current biodiversity status (Rajendran et al. 2004).

## RESULTS AND DISCUSSION

The most dominant mangrove plant species in Pichavaram mangrove forest were *Avicennia marina*, *Avicennia officinalis* (Avicenniaceae) and *Rhizophora apiculata*, *Rhizophora mucronata* (Rhizophoraceae). In comparison to Killai, *Avicennia marina*, *Avicennia officinalis*, and *Rhizophora mucronata* were the most dominant in Pichavaram and T.S. Pettai. Compared to Pichavaram and Killai, *Aegiceras corniculatum*, *Bruguiera cylindrica*, and *Lumnitzera racemosa* were the most dominant species in T.S. Pettai. The endangered *Xylocarpus mekongensis* was only found in small numbers in Pichavaram. *Acanthus ilicifolius*, *Aegiceras corniculatum*, *Avicennia marina*, *Bruguiera cylindrica*, *Ceriops decandra*, *Excoecaria agallocha*, *Lumnitzera racemosa*, *Rhizophora apiculata*, and *Avicennia marina* are common to all the mangroves of Tamil Nadu, according to an analysis of true mangrove species distribution in different areas of Pichavaram. The existence of a natural hybrid of *Rhizophora* species, *Rhizophora annamalayana*, is also notable in the Pichavaram. Kathiresan et al. 2003 also discovered *Xylocarpus mekongensis*.



Figure 1: *Bruguiera cylindrica*

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