

Samudraphala

Samudraphala trees are iconic in Mumbai, especially because of the row on Marine Drive that seems to watch over the city and the sea at the same time!



Samudraphala trees are medium-sized trees that grow in coastal locations in tropical Asia. Read on to learn more about the fascinating fruits, why the trees are called fish poison trees and the story behind Marine Drive's row of Samudraphala trees.

Common Names: Queen of Shores/Samudraphul / Samudraphala/ Fish poison tree
Species: *Barringtonia asiatica*



The flowers have 4-5 white petals and white stamens with pink tips, giving a distinct powder puff appearance. They bloom at night (and are only open for a single night), with their sweet scent attracting bats and moths for pollination. The leaves are usually obovate- this means they have an oval outline with a narrow end at the base-and they are sessile-they have no stalk.

The fruits are quadrangular, which is why they are often called Box Fruits. Fruit dispersal occurs by sea currents, and the fruits are able to float so well that fishermen would use them to make nets buoyant. In fact, when tested it was found that box fruits could stay floating in salt water for as long as 15 years! After the volcanic eruption of 1883 in Krakatau Island which destroyed much of the vegetation, *Barringtonia asiatica* was one of the first species to colonise the Indonesian island.

All parts of the tree are poisonous. The reason trees of the species *Barringtonia asiatica* are called fish poison trees is because of their famous ichthyotoxin (toxic to fish) properties. The seeds are toxic to fish because of the saponins within them. They are used by fishermen to either stupefy or kill fish in traditional fishing practices of regions like the Nicobar Islands



The methanol extracts of various parts of the tree have displayed antibacterial properties.

A methanol extract of the seeds coated on leaves of *Solanum* species can be used to protect Indonesia's pistachio and potato crop from certain larvae pests belonging to the *Epilachna* genus by acting as an antifeedant. This is environmentally friendly compared with many chemical pesticides.

Logs from the tree are used to make canoes and the wood is used as firewood. Leaves are sometimes used externally in traditional medicine to treat fractures, while seeds may be consumed to remove worms from the intestines. The trees are also often grown as avenue trees.

A Mumbai Tree Story

About the Marine Drive Samudraphal Trees, the book *Homi Bhabha: A Life* says

“TIFR decided to celebrate Bhabha's birthday as its Founder's Day. In October 1970, the institute presented several hundred trees to the city of Bombay for planting on Marine Drive. These trees, called *Barringtonia speciosa*, which grow well near the sea, were grown in the gardens of the institute for four years before being gifted to the city to honour Bhabha's memory.”

Note: TIFR stands for Tata Institute Of Fundamental Research and *Barringtonia speciosa* is a synonym for *Barringtonia asiatica*