

The use and values of important Mangrove species of Anadaman and Nicobar Islands

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Abstract

Halophytes growing in the muddy swamps of the estuaries of tropical and subtropical regions and seacoasts are flooded by rivulets and tides form the mangroves. Mangroves comprise the swamps, forestland within and its waterspread areas. In mangroves the phyto & zoo diversity is very rich and they are the salt tolerant and highly productive forest ecosystems. They also play a vital role in the environmental protection. The use and values of mangroves and mangroves ecosystem are many. The present study deals with the mangrove vegetation of Andaman and Nicobar Islands which constitute about 80 percent of the Indian mangroves.

In the mangrove ecosystem the plant and animal diversity is very rich and they are well known for greater diversity of flora and fauna. Mangrove ecosystems play a vital role in environmental protection. They help in checking soil erosion, acting as a wind breaker and building new areas. Studies on Indian mangroves were initiated as early as 17th century. Roxburgh⁶ described the flora of Sundarbans in "*Hortus Benghalensis*". Prain⁵ published Flora of Sundarbans in *The Records of Botanical survey of India*. In 20th century many workers came to limelight viz; Hooker², Cook¹, Troup⁷, Krishnamurty *et.al.*,³ Naskar and Guhabaksi⁴, and Untwale⁸. Mangrove ecosystem is well known for greater diversity of flora and fauna. Mangrove diversity depends on the habitat where mixture of fresh and salt water is maximum. The biodiversity of

mangrove vegetation has been affected by so many fluctuating physical and chemical factors. In India the total area of mangrove is about 674 sq. Km. which is nearly 7% of the world's mangroves. Typical plant associations of Indian Mangroves are *Avicennia officinalis*, *Avicennia alba*, *Acanthus ilicifolius*, *Aegialitis rotundifolia*, *Aegiceras majus*, *Kandelia rheedii*, *Sonneratia griffithii*, *Carapa obovata*, *Bruguiera caryophylloides*. Diversity of mangrove flora is represented by several families, genera and species. Mangroves are salt tolerant forest ecosystems and found in tropical and sub tropical inter-tidal regions of the world. They are trees or shrubs with evergreen thick and leathery leaves. Some mangrove roots extend above the water in the form of specialized vertical branches called pneumatophores. They act as aerating organ and also known as Breathing or respiratory

roots in *Sonneratia and Avicennia*. Along with root system they are adapted to the specific condition prevailing in mangrove forests, such as stilt root in *Rhizophora* and knee root in *Bruguiera*. A special type of germination found in mangroves which is called viviparous germination. In this type of germination the seeds germinate in the fruit itself when the later is still on the mother plant. After germination, the seedling grows and after attaining an appreciable size falls off on the marshy ground in such a fashion that root buries itself and the shoot remain aerial. Thus a new life of a young sapling starts.

Present study deals with some useful and important mangrove species of Andaman and Nicobar Islands. In Andaman district, area under mangrove is 729 Sq. Kms, while in Nicobar district mangroves occupy 37 Sq. Kms Area. The mangrove vegetation of these Islands constitute 9.4% of the land area or 10.8% of the total forest area.

Important uses of some Mangrove species of Andaman and Nicobar Islands :

Avicennia marina - Commonly known as 'White Mangrove' (Not found in Nicobar Island).

Avicennia officinalis - A tree with yellowish grey bark. Commonly found in Andaman.

Uses : Good fodder, Fire wood, fish food.

Bruguiera cylindrica - A medium sized to tall buttressed tree with smooth grey bark.

Uses: Timber, poles, tannin, perfume

from knee roots, dye, adhesive, Charcoal.

Ceriops decandra - Tall shrubs forming small buttresses, branches thick. Forms thin knee like pneumatophores.

Uses : High tannin, Biriany Charcoal, house building materials, fire wood.

Excoecaria agallocha - A commonly found small tree with acrid milky juice which is poisonous and blisters the skin.

Uses : Good paper pulp, soft wood, fish floats and poisonous sap.

Heritiera littoralis - A very common mangrove, bordering other mangroves. A tree of moderate size with thin plank-shaped curving buttresses and grey coloured cracked bark.

Uses : Good timber, paneling materials for ship and rayon.

Nypa fruiticans - A palm with underground stems, fibrous with a large white seed.

Uses : Very good thatching material and alcohol from fruit.

Rhizophora apiculata - One of the most commonly found species and distributed in almost all Islands. A moderate sized much branched and rough barked tree.

Uses : Fire wood, timber, Tannin adhesive, charcoal, light wine from the juice of seedling.

Sonneratia alba - Not commonly

found, much branched tree reaching up to 12M
Bark orange brown, branched silvery grey.

The uses and values of mangroves and the mangrove ecosystems are many. Majority of the people inhabiting in and around the mangrove forests use fuel energy from the mangrove woods. Mangroves are potential sources for good charcoal and alcohol. Many species of mangroves produce good timbers and used in several construction works like boat and ship building etc. Decoction from the fruits of *Xylocarpus* is said to give good remedy for breast cancer. Mangroves help to maintain coastal atmosphere equilibrium. Now the significance of mangrove ecosystem has been realized throughout the world.

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