

MANGROVES OF UTTARA KANNADA COAST

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Mangroves are salt tolerant plants growing in the swampy mud of coastal areas. They grow in intertidal zones of river mouths, lagoons and creeks which forms the estuaries where the river water mixes with seawater. Mangroves are equipped with many biological adaptations like pneumatophores, stilt roots, buttress roots, salt filtering roots, salt glands, lenticels etc. to survive in salt rich, oxygen poor soil that is periodically flushed by tides. Based on mangrove species found in different salinity range we classified in to three category

Low Saline Mangroves

(Sonneratiaceae)

Longer

Sonneratia caseolaris

trees.

pnematophores than Sonneratia alba.

Leaves rounded to egg shaped with knob

(hydathode) at tip. Leaves stalk pinkish

- Rhizophora mucronata, R. apiculata, Sonnaratia alba, Avicennia marina, Bruguiera cylindrica, Acanthus ilicifolius, Excoecaria agallocha. 1) High salinity mangroves

staight

2) Medium salinity mangroves - Kandelia kandel, Avicennia officinalis, Aegiceras corniculata, Bruguiera gymnorhiza, Lumnitzera littorea.

Taller

3) Low salinity mangroves - Sonneratia caseolaris, Acrostichum aureum.

Importance of Mangroves

- Coastal shore stabilization, protection from erosion
- > Acts as Bio shield Tsunami and Cyclones.
- ▶ Nutrient rich regions and habitat for diverse taxa
- > Feeding and roosting grounds for birds and wetland animals
- Goods include -Fire wood, Medicine, Fodder, etc.
- Sequester carbon and helps in reducing Global Warming. Nutrients and Heavy metal uptake - helps in maintaining water quality and salinity

Leaf morphology

Education, Research and Eco Tourism

S. alba

A. marin.

R. aplculata

A. officinalis

Root morphology

Success Starts



A. Mic/foik/s

S. caseolaris



persed counder bulls as A crostichum aureum (Pterick.ceae) Pero Ferns to 1415 m tal. Rh zone woody. Pinnately compound leaves. Dark brown sporangia on the under surface of leaves.

Medium Saline Mangroves

Kandelia kandel (Rhizophoraceae) Tress with stein base buttressed with closely attaching stilt roots. Fraves slightly rounded at tip. Flowers white, petals 5. Propagules narrow and long.



Avicennia officinalis (Avicenniaceae) Large res. Pencil paercatopheres. Leat tip rounded. Flowers yellow Stamens 4, included.

Argiveray conniculata (Myrsinaceae) Shrube. leathery, gland Leaves dotted, abovate. Flowers white, fragrant in dense umbels. Frus sickle shaped and pointed at apex







(Ramophoraceae) Tree with rough bark: stem base buttresses. Leaves elliptic with a

Luminetzera racemosa (Combretaceae) Small trees or shrubs. Leaves alternate, stalkless. Leaf tip notched (emarginate) with hydathode (water pore).Flowers white,



Porteresia coarctata (Poaceae) Perrennial grasses. Leaves with Spikelets in spinulose margins. narrow panicles.



High Saline Mangroves

Rhizophora mucronata (Rhizophoraceae) Tall trees with branched stilt roots, Leaves broad, tip long narrow pointed, Flowers cream coloures, stalked. Propagules long, straight.

Rhizophora apiculata

(Rhizophoraceae) Tall trees with branched stilt roots, Leaf stalk and midrib pinkish. Leaf tip long pointed, Flowers cream coloured stalkless. Popagules long, slightly bent at tip.





Sonneratia alba (Sonneratiaceae)

Bushy trees with pnematophores. Leaf sub-rounded, thick. Flowers white with numerous white stamens. Fruit large ball size berry.

Avicennia marina

(Avicenniaceae) Trees with yellow stems. Pencil like pnematophores. Leaf tip pointed, whitish beneath. Flowers yellow, stamens-4, exserted. Fruits almond like.



Bruguiera cylindrica (Rhizophoraceae)

Tall buttressed tree. Knee roots rounded egg shaped. Leaves tip pointed. Flowers white Calyx tube green, reflexed (inside turned) lobes.

Excoecaria agallocha

(Euphorbiaceae) Small trees with milky latex. Serpentine roots. Leaf turning red before shedding, margins smoothly toothed. Flowers tiny yellow fragrant, catkin.



Acanthus illicifolius (Acanthaceae) Shrubs, Leaf lobed, tip spiny, Flowers blue.



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