researchNOTE | *International Journal of Plant Sciences,* (July, 2010) Vol. 5 Issue 2 : 698-699

Mangrove populations of Vamsadhara estuary

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Accepted : March, 2010

Key words : Mangrove, Flora

Mangroves of Andhra Pradesh have been studied by various authors in different estuarine regions such as Godavari estuary (Rao, 1959; Umamaheswara Rao and Narasimha Rao, 1988) Krishna estuary (Venkanna and Narasimha Rao, 1993) Sarada and Varaha estuaries complex (Narasimha Rao and Venkanna, 1996) Visakhapatnam (Narasimha Rao, 2008). So far no report is available in the literature on the occurrence of mangroves in the Vamsadhara estuary. In the present study an attempt has been made to study the mangrove populations along the Vamsadhara estuary near Naupada. Vamsadhara estuary located between 18^0 32^1 73 N 84^0 19^1 80 E on the east Coast of India, near Naupada and in between Visakhapatnam and Chilaka lake. Vamsadhara is the 4th largest river in Andhra Pradesh originated in the Eastern Ghats of Orissa and bifurcated into major and minor branches, major branch merged into Bay of Bengal at Kalingapatnam and minor branch flows through various parts and finally merges into Bay of Bengal at Bhavanapadu. Mud flats and some islands like structures are formed with mangrove plants. Mangrove forest occurs from Meghavaram to Bhavanapadu. The mouth region which is Bhavanapadu to upward region Meghavaram is 10-12 km, along this estuary mangrove forest occurs on either side of the river branch. From waterfront to barren zone mangrove forest spreads only 10 to 15 meters,

Table 1 : Mangroves and associated flora of Vamsadhara estuary

Sr. No.	Name of the species	Family
1.	*Acanthus ilicifolius* L.	Acanthaceae
2.	*Aegiceros corniculatus* (L.) Blanco	Myrsinaceae
3.	*Avicennia marina* (Forsk)Vierh	Verbenaceae
4.	*Avicennia officinalis* L	Verbenaceae
5.	*Cynodon dactylon* (L.) Pers	Poaceae
6.	*Dalbergia spinosa* (Dennst) Mabb.	Fabaceae
7.	*Derris trifoliata* Lour	Fabaceae
8.	*Excoecaria agallocha* L	Euphorbiaceae
9.	*Ipomoea tuba* (schlect.) G.Don	Convolvulaceae
10.	*Myriostachya wightiana* (Stend.) Hook.f.	Poaceae
11.	*Prosophis chilensis* (Molina) Stuntz.	Mimosaceae
12.	*Sesuvium porstulacastrum* (L) L.	Aizoaceae
13.	*Suaeda maritima* (L.) Dumm.	Chenopodiaceae
14.	*Suaeda monoica* Forsk.ex. Gmel	Chenopodiaceae
15.	*Suaeda nodiflora* . Moq	Chenopodiaceae

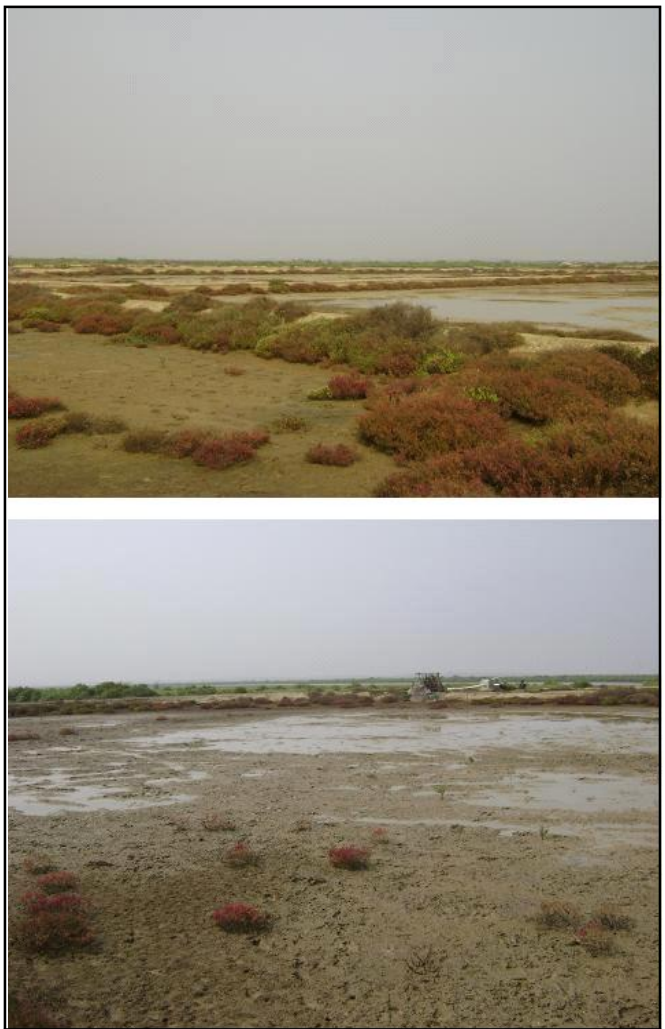

Plate 1 : Mangrove forest converted in to aquaculture forms

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transition zone comprises the halophytic plants only.

On the either side of the river most of the forest was converted into aqua forms. In the mangrove ecosystem in general a typical zonation occurs but in this mangrove ecosystem there was no such zonation. No barren zone and thick halophytic vegetation, this region completely transformed into shrusmp and fish culture ponds (Plate 1). A thin length *i.e.* 10 to 15-meter length ecosystem was present with different mangrove and associated plants. Table 1 shows flora comprising the mangroves and other plants in the Vamsadhara estuary. Total 15 mangrove species were present with sub normal growth. Maximum height of the mangrove plants was not more than 8-10 meters. Vegetation was not so thick even at water front region. Conversion of this important ecosystem into aqua forms and regular interference of human beings for timber and other purposes may further deteriorate the mangrove ecosystem Vamsadhara estuary.

Acknowledgement:

Grateful thanks are due to Ananda Rao Pragada, Vikunta Rao Pragada of Nandigam village and Venkata Reddy of Moolapeta village for their kind help and cooperation during the field trips.

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