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DISTRIBUTION AND DIVERSITY OF HALOPHYTES AT BHAVANAPADU, ANDHRAPRADESH.

KEYWORDS

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ABSTRACT Halophytes are a peculiar group of plants associated with the Mangrove populations. In recent years edible oils and bio fuels are extracting from these plant populations for the benefit of the Humanity. Present communication deals with species composition and density of Halophytes at Vamsadhara estuary of Andhra Pradesh. 2x2 M quadrant was used to analyze the density of plant populations. Species like *Suaeda moritima*, *Suaeda monoica* and *Sesuvium portulacastrum* were reported as dominant forms in this estuary. Minimum density was reported for *Heliotropium curassovicum.*

INTRODUCTION:

Mangroves ecosystems of Andhra Pradesh has been studied by several authors in different mangrove habitats such as Godavari estuary (Rao, 1959; Sidhu, 1963; Raju,1968; Uma maheswara Rao & Narasimha Rao, 1988; Bhaskara Rao, et al. 1992; Narasimha Rao and Murty, 2010 a; Narasimha Rao and Subba Rangaiah, 2010; Narasimha Rao, 2012; Narasimha Rao and Murty, 2014) Krishna estuary (Venkanna and Narasimha Rao,1993) Sarada and Varaha estuarine complex (Narasimha Rao and Venkanna 1996; Narasimha Rao, 2008) Visakhapatnam (Venkanna et al, 1989; Narasimha Rao 2008). Mangrove populations of Vamsadhara estuary was studied by Narasimha Rao and Murty (2010 b). Very little information was available on the density of halophytes in the Mangrove ecosystems of Andhra Pradesh. Narasimha Rao et al (2012) studied the composition and density of halophytes at Vainateeyam estuary. Narasimha Rao and Reddi (2013) studied the density of *Salicornia brachiata* (a potential halophyte) in Godavari estuary. In the present study an attempt was made to collect the information as density of various halophytic populations in Vamsadhara estuary.

MARERIALS AND METHODS:

Vamsadhara estuary is lies between 18^{O} 32' 73 N 84^{O} 19' 80 E on the East coast of India near Naupada. Vamsadhara is the 4th largest river in Andhra Pradesh originated in Odisha and bifurcated into, major and minor branches, major branch merged with Bay of Bengal at Kalinga Patnam and minor branch merges into Bay of Bengal at Bhavanapadu along with estuarine region halophytes occur on either side of the estuary.

3 study sites were selected randomly in the estuarine habitats. Halophyte in the estuarine region was studied by using 2x2 M quadrant. A total of 45 quadrant samples were collected to analyze the data on abundance halophytes in Vamsadhara estuary.

RESULTS AND DISCUSSION:

Data collected on distribution and density of Halophytes in Vamsadhara estuary was presented in Table 1 & Table 2. Table 1 shows the halophytes present in the estuarine region of Bhavanapadu. A total, 7 species of Halophytes were observed in the present investigation.

Total halophytic vegetation was dominated by the species of *Suaeda.* Table 2 shows the density of the individual species in Bhavanapadu mangrove habitats. In station 1 maximum density was reported for the species *Suaeda monoica* (1436 plants/hec) and minimum density was reported for the species *Heliotropium curussavicum* (426 plants/hec). *Suaeda maritime, Suaeda monoica* and *Suaeda nudiflora* emerging with high density plant species in station 1.

TABLE: 1

Populations of Halophytes in Vamsadhara estuary.

Name of the plant	Family
Arthrocnenum indicum	Chenopodiaceae
Prosophis chilensis	Mimosaceae
Suaeda maritime	Chenopodiaceae
Suaeda monoica	Chenopodiaceae
Suaeda nudiflora	Chenopodiaceae
Sesurcium portulacostrum	Aizoaceae
Heliotropium curussavicum	

TABLE: 2

Density of halophytes in two different stations of Vamsadhara estuary.

Name of the plant	Station 1 (Density/h)	Station 2 (Density/h)
Arthrocnenum indicum	716	926
Prosophis chilensis	862	784
Suaeda maritime	986	1066
Suaeda monoica	1436	1182
Suaeda nudiflora	1120	1274
Sesurcium portulacostrum	684	762
Heliotropium curussavicum	428	396

In station 2, there is no significant variation in abundance of Halophytes when comparing with Station 1. Maximum density was reported for *Suaeda nudiflora* (1274 plants/hec) and minimum density (396 plants/hec) for the species *Heliotropium curussavicum.* In this station also maximum density was recorded for the plants such as *Suaeda maritima, Suaeda monoica* and *Suaeda nudiflora.* As a whole the estuarine regions of the Bhavanapadu was dominated by the few halophytic species. Present observations on halophytes of Vamsadhara estuary agrees with the studies of Narasimha Rao et al (2012) and Narasimha Rao and Reddi (2013).

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