



## **ETHNO MEDICAL SURVEY ON CORINGA MANGROVE FOREST SITUATED AT EAST GODAVARI DISTRICT OF ANDHRA PRADESH INDIA**

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### **ABSTRACT**

Mangrove forest acts as a barrier against costal storms, high velocity winds, and the high tidal waves thus protecting the villages and the agricultural lands in and around. They provide highly value products like Timbers, tannin materials, seedlings for food and medicinally valued drugs. The present study aims at performing ethnomedical survey on Coringa mangrove forest situated at East Godavari district of Andhra Pradesh, India. The study in tends to scientifically document the medical plants available in Coringa mangrove forest. In the present account, 30 species of plants belonging to different families are reported. They are used as ethnomedicines for various several diseases like snake bite, stomach ache, joint pains, asthma, urinary disorder, etc. common diseases and health complaints like ,stomach ache, skin diseases, are cured by using the different modes of preparations of various plants found in the Coringa wild life sanctuary. Present investigation indicates that mangrove plants that growing the Coringa wild life sanctuary is used to cure various ailments and diseases.

Keywords: Coringa Mangrove forest, Ethnomedical survey, Wild life sanctuary, Andhra Pradesh.

### **INTRODUCTION**

Mangroves are salt-tolerant forest ecosystem of tropical and sub tropical intertidal regions of world. they normally occur between high water level and near about mean sea level along the sheltered shores estuaries, tidal creeks, back water, lagoons, mangroves to form extensive tidal where conditions favor the mangroves to form extensive and productive rest in the sheltered coastal lines. Mangroves contain a highly specialized community of plants associated with animal's species which are not capable of surviving in any other situation [1-3]. Estimates of the area of India's mangrove wetlands range from 5,00,000 ha. (Forest Survey of India, 1998) to 6,81,000 ha. (Sidhu, 1963).

The major mangrove wetlands are located along the East Coast. On the west coast, they are predominant in Gujarat. Along the east coast, the tidal amplitude as well as the volume and periodicity of fresh water inflow decrease from Sundarbans in the north to Muthupet in the south[4-7]. Correspondingly, the species diversity and area of mangrove wetlands also decrease from north to

south, indicating the influence of fresh water inflow and tidal amplitude on the health and wealth of mangrove wetlands. Mangrove wetlands of India can be classified into a) tide-dominated (Sunderbans and Mahanadi mangroves), b) river dominated (Godavari, Krishna, Muthupet, Pichavaramangroves) and c) drowned river valley [8-11].

### **GEOGRAPHY**

Coringa Wildlife Sanctuary is 18 km from the port city of Kakinada, on the Kakinada-Yanam state highway, nestling on the deltaic branches of gouthami and godavari Rivers at Kakinada Bay. It is located between 16°-30' to 17°-00' N latitudes and 82°-14' to 82°-23'E longitudes. The sanctuary is a part of Godavari estuary and has extensive mangrove and dry deciduous tropical forest. About half of the area is the back water, which includes a sand pit of 18 km length. The rivers Coringa and Gaderu and their deltaic branches intersect the region, along with other water channels.

This forms about 335.7 square km of marsh vegetation. The average temperature of the region is 17°C to 40°C. Average rainfall is greater than 1,000 mm. The Corangi extension R.F. as per the records of Forest department is 19,467 ha. As Kakinada Bay falls under this R.F. more than 50% of the area is under water bodies. The vegetation along the Matlapalem creek and Gaderu creek are thick. The soil of this R.F. is clayey in the Gaderu riverside and sandy clay near the Bay side [12-15].

### METHOD OF SURVEY

Preliminarily a onetime cross section survey was conducted among the natives of coringa to develop Ethan medicine practiced by them. A single questionnaire was prepared .based on questionnaire each sample member is interviewed and the herbs used by them is medicine was identified by same sample members. The plants were authenticated with the help of local taxonomist. For a over period of three months, a sample members were tracked and were interviewed repeatedly and data collected was authenticated and alloberated by this method of longitudinal survey and data collection initially the

sample member was well motivated for active participation in this survey [16-17].

### Design of the questionnaire

The questions were simple and straight forward in local language consuming less time a total of 11 questions were post each time .The questions were designed in such a way to extract more information from motivated sample members.

### Survey methodology topics

The most important methodological challenges of a survey methodologist include making decisions on how to identify and select potential sample members.

- Contact sampled individuals and collect data from those who are hard to reach (or reluctant to respond)
- Evaluate and test questions.
- Select the mode for posing questions and collecting responses.
- Train and supervise interviewers (if they are involved).
- Check data files for accuracy and internal consistency.
- Adjust survey estimates to correct for identified errors.

**Table 1. Area of mangrove vegetation in coastal state of India**

S.No	STATE	PLACE	AREA IN SQ.KM
1	Tamilnadu	Muthupet	12
2	Tamilnadu	Pichavaram	9
3	Andhra Pradesh	Krishna	156
4	Andhra Pradesh	Godavari	241
5	Orissa	Devi Mouth	10
6	Orissa	Mehandi & Bhitarkanika	205
7	West Bengal	Suntarbans	2125
8	Gujarat	Gulf of Kutchch	994
9	Gujarat	Gulf of Kambat	32
10	Maharashtra	Mumbai	96
11	Maharashtra	Ratnagiri	12
12	Goa	Goa	5
13	Karnataka	Karwar	3
14	Andaman & Nicobar Islands	Nicobar	37
15	Andaman & Nicobar Islands	Andaman	929

### RESULTS

**Table 2. Ethnomedical survey of Coringa forest [18-34]**

S. No	NAME OF THE PLANT SPECIES	FAMILY	TELUGU NAME	HABI T	MEDICINAL VALUE
1.	<i>Aegiceras corniculatum</i> (L) Blanto	Myrsinaceae	Guggilam	Tree	1. Analgesic 2. Rheumatism 3. Inflammation
2.	<i>Avicennia alba</i> Bl.	Avicenniaceae	Elaramada	Tree	1. Herbal medicine to make a tonic. 2. Birth control.
3.	<i>Avicennia marina</i> (Forsk.)Virch.	Avicenniaceae	Thellamada	Tree	1. Astringent. 2. Toothache.
4.	<i>Avicennia officinalis</i> (L.)	Avicenniaceae	Nallamada	Tree	1. Asthma. 2. Diarrhea, rheumatism, smallpox,

					ulcer, Snakebites, skindisease, leucorrhoea, tumours.
5.	<i>Bruguiera cylindrica</i> (L.) BL.	Rhizophoraceae	Urudu	Tree	1. Stop bleeding. 2. Lowers blood pressure.
6.	<i>Bruguiera gymnorhiza</i> (L.) savigny	Rhizophoraceae	Kandriga	Tree	1. Eye ailment. 2. Astringent. 3. Diarrhoea & fever.
7.	<i>Ceriops decandra</i> (Griff) Ding hou	Rhizophoraceae	Thogara	Tree	1. Antimicrobial activity.
8.	<i>Excoccuria agallocha</i>	Euphorbiaceae	Thilla	Tree	1. Fish and arrow head poison, cure for fish sting. 2. Tooth-ache, ulcer.
9.	<i>Lumnitzera racemosa</i> wild.	Combretaceae	Thanduga	Tree	1. Anti-herpetic and as cure of itches. 2. Treatment of diabetes.
10.	<i>Rhizophora apiculata</i> BL.	Rhizophoraceae	Ponna	Tree	1. Antiviral 2. Antiseptic 3. Diarrhea, dysentery, fever, malaria and leprosy.
11.	<i>Rhizophora mucronata</i> Lamk.	Rhizophoraceae	Ponna	Tree	1. Astringent. 2. Angina, dysentery & hematuria. 3. Leaves and roots are used during childbirth.
12.	<i>Scyphiphora hydrophyllacea</i> Gaertn.f.	Rubiaceae	Nara thanduga	Tree	1. Stomachaches.
13.	<i>Sonneratia alba</i>	Sonneratiaceae	Pedba Kalinga	Tree	1. Cuts and swellings.
14.	<i>Sonneratia apetala</i>	Sonneratiaceae	Kalinga	Tree	1. Anti-oxidant .2. Antidiabetic. 3. Antibacterial and anti cancer properties.
15.	<i>Xylocarpus grantum</i>	Meliaceae	Senuga	Tree	1. Fruits -to cure for swellings of breast and elephantiasis. 2. Seeds- ash mixed with sulphur and coconut oil is applied as an ointment for itches.
16.	<i>Xylocarpus moluccensis</i> (Lamk)	Meliaceae	Senuga	Tree	1. Appetizer. 2. Dysentery, diarrhea & other abdominal troubles.
17.	<i>Acanthus ilicifolius</i> (L.)	Acanthaceae	Alichy	Shrub	1. Rheumatic complaints 2. Diuretic. 3. Remedy for bilious swellings.
18.	<i>Aeluropus lagopoides</i> (L.)	Poaceae	-	Herb	1. Wound healing. 2. Painkiller.
19.	<i>Caesalpinia crista</i> (L)	Caesalpiniaceae	Rakkisi	Vine	1. Antihelmentic. 2. Colic convulsions, Leprosy. 3. Antiperiodic and rubeifacient.
20.	<i>Clerodendrum inerme</i>	Verbanaceae	Pisingi	Tree	1. Leaf paste- skin rashes. 2. Leaves – for controlling joint pains.
21.	<i>Albergia spinosa</i>	Fabaceae	Chillinga	Shrub	1. Rheumatism, fever, hypertension. 2. Cough, skin rashes muscular pain. 3. Vernal diseases.

22.	<i>Derris trifoliata.</i>	Fabaceae	Nallatheega	Vine	1. Roots-Asstimulant, antispasmodic. 2. Counter-irritant against rheumatism & chronic paralysis. 3. Roots and stems-laxative, carminative & anti-arthritis.
23.	<i>Fimbristylis ferruginea</i> (L.)	Cyperaceae		Herb	No medicinal value.
24.	<i>Hibiscus tiliaceus</i> (L.)	Malvaceae	Attakanara	Tree	1. Leaves - fever & cough. 2. Dysentery. 3. Chest congestion & during birth.
25.	<i>Ipomoea pes-caprae</i> (L.)	Convolvulaceae	-	Vine	1. Analgesic. 2. Antibacterial. 3. Antifungal.
26.	<i>Ipomoea tuba</i>	Convolvulaceae	Theellateega	Vine	1. anti-microbial. 2. Analgesic. 3. Anti-fungsl.
27.	<i>Suaeda maritime</i> (L.)	Chenopodiaceae	Elakura	Herb	1. Analgesic. 2. Antimicrobial 3. Antiseptic
28.	<i>Thespesia populneoides.</i>	Malvaceae	Ganguravi	Tree	1. Skin diseases 2. Bark- Treatment of haemorrhoids and chronic dysentery. 3. Fruits and leaves - psoriasis, scabies and other cutaneous diseases.
29.	<i>Suaeda nudiflora</i>	Chenopiodaceae	Elakura	Herb	1. Anti-bacterial. 2. Anti-hellmentic. 3. Anti-oxidant.
30.	<i>Tamarix troupii</i>	Tamariaceae	Palivela	Tree	1. Digestive diseases and lung diseases. 2. Cardiotoxic, diaphronic and stomachic.

## CONCLUSION

In the present account, 30 species of plants belonging to families are reported. They are used as Ethnomedicines for various several diseases like snake bite, stomach ache, joint pains, asthma, urinary disorder, etc. by employing the leaf preparations in the form of extracts, pastes, juices, etc. other common diseases and health complaints like stomach ache, skin diseases are cured by using the different modes of preparations of various plants found in the coringa wild life sanctuary.

Present investigation indicates that mangrove plants that growing the coringa wild life sanctuary are used to cure various ailments and diseases.

**ACKNOWLEDGEMENT:** None

**CONFLICT OF INTEREST:**

The authors declare that they have no conflict of interest.

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