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Ethnobotanical Survey of Mangroves and Wetlands Plants for Sustainable Livelihood and Development

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Abstract--- Mangroves are world's most productive ecosystems and support genetically diverse community of terrestrial and aquatic flora (plants) and fauna (animals). They provide innumerable direct and indirect benefits to human beings. The ethnobotanical information of the mangroves were collated and their medicinal uses, parts used, diseases being used for like flatulence, epilepsy, small pox, malaria, diabetes, fever, hepatitis e.t.c. The collected information was discussed with previous authentic report on anti-microbial activities of mangroves.

Keywords: Development,Ethnobotany, Livelihood, Mangrove, Plant, Sustainable, Wetland

1 INTRODUCTION

Mangroves is an ecological term referring to a taxonomically diverse assemblage of trees and shrubs that form the dominant plant communities in tidal, saline wetlands along sheltered tropical and subtropical coasts [1]. Economically, mangroves are a great source of timber, poles, thatch and fuel, the bark is used for tanning materials [2]. Some species have food or medicinal value [3]. Mangroves are biochemically unique, producing a wide array of novel natural products. Substances in mangroves have long been used in folk medicine to treat diseases [4]. The medicinal properties of mangrove trees (plants) provide a wide domain for medicinal uses; most yet to be explored. Nature's Nurse, Healing properties are attributed to *Rhizophora* trees in popular/folk medicine in which root, leaf, and stem extracts of *Rhizophora* trees have inhibitory properties affecting the growth of various human pathogenic organisms. Among these are bacteria, fungi and viruses [5]. The bark of red mangrove trees has been used in the folk remedy for a wide array ofdiseases [6]. With these, it is therefore important that the ethnobotanical values of Mangrove plants in the Mangrove forest be documented.

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2 Materials and Methods

Ethnobotanical surveys of the Mangrove plants were conducted. First-hand information regarding the plants in the areas and the conventional knowledge about the medicinal uses of Mangrove plants was obtained through interviews of randomly selected indigenes. The collected information was correlated with available literature and other authentic reports on anti-microbial activities of Mangroves.

2.1 Description of the Mangrove

Mangroves are found between latitudes 32^0N and 38^0S along the tropical coasts of Africa, Australia, Asia and America. They grow in high and low-tide areas and experience the alternation of ebb and flow. Mangrove forests once covered three-fourths of the coastlines of the tropical and sub-tropical countries, of which less than 50% remains today, and half of the remaining forests are degraded [1], Although, this and other estimations have been controversial [7].

3 Results and Discussion

The collected ethnobotanical information of Mangrove plants/species are presented in the Table 1 below.

A total of ninety (19) different plant species were collated from the oral interview belonging to Ten (10) families namely; *Rhizophoraceae*(5), *Euphorbiaceae* (3), *Avicenniaceae* (3),*Pteridaceae* (2), Meliaceae (1) *Combretaceae* (1), *Myristinaceae* (1), *Casuarinaceae* (1), *Acanthaceae* (1) and *Malvaceae* (1). Different plant parts (leaf, bark, fruit, latex, Rhizomes and in some cases the whole plant) were used for the treatment of skin diseases, kidney stone, Hepatitis, Ulcer,

Elephantiasis, Diarrhoea, Asthma, Malaria, Wound and Boils.

According to [4], a wide range of activities had been ascribed to *Avicennia ilicifolius* in the treatment of paralysis, asthma; diabetes, rheumatism, possessing analgesic and anti-inflammatory dyspepsia, hepatitis, skin diseases, snake-bite and stomach pains [7]. Mangrove plants are a rich source of steroid triterpenes, saponims, flavonoids, alkaloids tannis[9, 10]. *Avicennia marina, Avicennia officinalis, Exacoecaria allallocha, Rhizophora appculata and Lumnitzera racemosa* exhibited more inhibition of *S. aureus and Proteus sp* [11].*Exvecaria agallocha* showed significant analgesic activity [12]. *Avicennia ilicifolius* is used for skin disorders, boils and wounds.

Table 1: Ethnobotanical of Mangrove Plants

S/N	Botanical Name	Family	Part Used	Uses
1.	*Acanthus ilicifolius*	Acanthaceae	Leaves, fruit	Skin disease, kidney stone, small pox & ulcer snake poison
2.	*Aegiceras cornicula-tum*	Myristicaceae		Asthma, diabetes, rheumatism, fish-poison
3.	*Avicennia marina*	Avicenniaceae	Leaves	Rheumatism, small pox, ulcers, fodder for livestock
4.	*Avicennia officinalis*	Avicenniaceae	Leaves	Joint pain, Urinary disorder, hepatitis, Leprosy, bronchial asthma
5.	*Bruguiera cylindrical*	Rhizophoraceae	Young leaf	Hepatitis
6.	*Ceriops decandra*	Rhizophoraceae		Hepatitis, Ulcer
7.	*Excoecaria agallocha*	Euphorbiaceae	Latex	Purgative, epilepsy, conjunctivitis toothache
8.	*Lumnitzera racemosa*	Combretaceae	Powder	Antifertility, Asthma, Diabetes
9.	*Rhizophora apiculate*	Rhizophoraceae	Leaf, fruit	Astringent for diarrhea, vomiting, Nauses hepatitis, insecticides
10.	*Rhizophora mucronata*	Rhizophoraceae	Bark, leaves	Elephantiasis, Haematoma, hepatitis, ulcers, febrifuge, hemorrhage
11.	*Rhizophora lamarckii*	Rhizophoraceae	Leaves	Hepatitis
12.	*Xylocarpus granatum*	Meliaceae	Bark, leaf	Fevers, Malaria, Cholera
13.	*Avicennia alba*	Avicenniaceae	Young leaf	Cut, wound
14.	*Acrostichum aureun*	Pteridaceae	Rhizomes, leaves	Stops bleeding, wounds, boils
15.	*Acrostichum speciosum*	Pteridaceae	Rhizomes leaves	Boils, wound
16.	*Euphorbia heterophylla*	Euphorbiaceae	Leaves	Constipation
17.	*Euphorbia hirta*	Euphorbiaceae	Whole plant	Herpes, Lactogogue
18.	*Casuarina equisetifolia*	Casuarinaceae	Root	Headache, Encephalitis
19.	*Sida acuta*	Malvaceae	Whole plant	Joint and Muscle pain

4 Conclusion

It is clear that the information of traditional knowledge about the medicinal values of mangroves coincide with authentic reports of antimicrobial properties of mangroves.

Increased human needs, commercial activities and urban development demands are leading to the rapid conversion of mangrove forest vegetation. Therefore, sound management strategies are urgently needed to conserve the mangroves for their ethnobotanical values.

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