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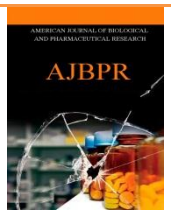

SOME MEDICINAL GRASSES IN THALAPPILLY TALUK OF THRISSUR DISTRICT, KERALA, INDIA

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ABSTRACT

The present study on the medicinal grasses of Thalappilly Taluk of Thrissur district, Kerala reveals that, there are about 15 species of grasses which are spreading over 15 different genera are possessing various medico-potentialities in their various plant parts. They utilize these grasses for the preparation of different medicinal formulations to cure various ailments like stomach-ache and gastric disorders, dysentery, head-ache, piles, fever, rheumatic pain, cuts and wounds etc.

INTRODUCTION

Grasses belong to family Poaceae which is one of the largest families of flowering plants. Grasses occur on all continents, including Antarctica, which means that grass species are adapted to almost every terrestrial habitat on earth [1]. The grass family occupies 23% of the land area of the world, playing a significant role in the life of human beings and animals, and has a paramount role as a food provider, accounting for more than 80% of the world's calories [2]. Besides, they provide shelter, shade, fiber, molasses, drinks (sugarcane juice), and particularly the bamboos which are inseparable from our daily life. These apart, the medicinal importance of the grasses is also remarkable due to their various uses in rural areas of India even today [3].

Grasses contribute tremendously to the earth's green mantle of vegetation. They are one of the most widely distributed groups of angiosperms with gross morphological complexity [4].

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Their importance in the plant kingdom is highly remarkable, more over their ability to flourish and spread quickly in great areas of low rainfall. Many are cultivated as cereal crops, as ornamentals and as plants of medicinal and industrial importance. Grasslands form an important vegetation type in the high ranges of Western Ghats in the states of Kerala, Karnataka and Tamil Nadu [5].

MATERIALS AND METHODS

Study area

Thrissur district of Kerala and it is situated in South Western parts of the state (10.52°N 76.21°E) (Fig.1&2). It is bounded on the north by small parts of Malappuram district, on the east by Palakkad district and south by Ernakulam district, and on the west by the Arabian Sea (54 km). It is distributed in an area of about 3,032 km^2. The major river systems, which are runs through the district are Periyar, Kurumali river and Bharatha puzha. They take their origin from the mountains on the east, and flow westward and discharge into the Arabian Sea. There are a number of tributaries also joining to these main rivers. The annual rainfall is about 3000 mm. The hot season from March to May is followed by the South West Monsoon season from June to September. However the rain stops by

the end of December and the rest of the period is generally dry. The present study was conducted in the Thalappilly Taluk of Thrissur district, Kerala. The major localities of the Taluk includes Chelakkara, Desamangalam, Kondazhy, Mullurkara, Panjal, Pazhayannur, Thiruvilwamala, Vallatholenagar, Varavoor, Kunnamkula, Chowannur, Erumapetty, Kadangode, Kadavallur, Kattakampal, Porkulam and Velur.

Documentation

The present study was based on an extensive survey and field observations during the year 2014 – 2015. In this study an attempts were made to find out the diversity of grass species in the Thallapilly Taluk of Thrissur District, Kerala.

The medico-potentiality of the grasses was collected by the discussions with local people as well as scrutinizing the literature review. The collected specimens were identified taxonomically with the help of available floras and literature [6,7].

The specimens were processed for the preparation of Herbarium. The voucher specimens were deposited in the Herbaria of Post Graduate Department of Botany, Deva Matha College Kuravilangad, Kottayam for future reference.

Table 1. List of Medicinal grasses in the Study Area

Sl.No	Botanical Name	Parts Used	Medicinal Uses
1	***Chrysopogon aciculatus*** (Retz.) Trin. (Pl-1A)	Rhizome	Rhizome-paste is mixed with *Piper nigrum* seeds and it is given at early morning in empty stomach to cure stomach-ache and gastric disorder.
2	***Coix lacryma jobi*** L.	Seeds	The decoction of the seeds is taken at early morning in empty stomach to cure dysentery.
3	***Cymbopogon flexuos*** Nees *ex* Steud. (Pl-1B)	Leaves	The leaf extract is used as balm to cure head-ache of the children.
4	***Cynadon dactyon*** (Linn.) Pers**.**	Leaves	Leaf extract is applied on the external portion of the eyelid to cure redness and irritation of the eye caused due to summer heat. The crushed plants are also applied on the cuts to check bleeding.
5	***Dactyloctinium aegytium*** (Linn.) Willd.	Whole plant	The plant extract is applied for worm infection.
6	***Echinochloa colona*** (L.) Link. (Pl-1C)	Whole plant	The plant extract is used to cure indigestion.
7	***Eleusine indica*** (Linn.) Gaertn	Whole plant	Plant extract used for the treatment of stomach problems and digestive troubles.
8	***Eragrostis uniloides*** (Retz.) Nees *ex* Steud	Leaves	The leaves of the grass are crushed into paste and applied to the wounds.
9	***Heteropogon contortus*** (L.) P.Beauv (Pl-1D)	Whole plant	The plant extract is used to cure toothache. Roots of the plants are used for the treatment of snake-bite.
10	***Oryza sativa*** L.	Roots	Fresh root paste mixed with the seed paste of *Piper longum* is given for the treatment of measles. Water obtained by washing the rice is given with a pinch of common salt to cure dyspepsia.
11	***Panicum repens*** L.	Stem	Fresh juice prepared from the stem of the plant and it is filtered. This filtrate is used as eye drop to cure eye irritation. Fresh stolon is made into a paste and mixed with *Piper nigrum* seeds, this paste is taken to cure piles.
12	***Paspalum scrobiculatum*** L**.** (Pl-1E)	Roots	Freshly prepared root decoction with *Piper nigrum* paste along with a pinch of common salt is given twice a day before lunch and dinner as a tonic during typhoid fever.
13	***Saccharum officinarum*** L.	Stem	Stem juice is mixed with a pinch of table salt and a few drops of citrus juice is given to jaundice patient. Stem juice mixed with *Piper nigrum* paste is given for the treatment of digestive problems.
14	***Setaria pumila*** (Poir.) Roem & Schult. (Pl-1F)	Roots & Seeds	Freshly prepared root paste is applied for reducing the rheumatic pain. Grains are boiled and pounded to paste after it is mixed with *Piper nigrum* seeds at a ratio of 3:2. Then it is applied on the bull's neck sores.
15	***Vetiveria zizanioides*** (L.) Nash.	Roots	Fresh roots are made into paste and it is applied on the fore-head to cure head-ache. The decoction of the plant is given for urinary problems. Fresh root decoction is used as a mouth freshener.

RESULTS AND DISCUSSION

The present study on the medicinal grasses of Thalappilly Taluk of Thrissur district, Kerala reveals that, there are about 15 species of grasses which are spreading over 15 different genera are possessing various medico-potentialities in their various plant parts such as Whole plant (4 No.s), Leaves (3 No.s), Roots (3 No.s), Stem (2 No.s), Seeds (2 No.s) and Rhizome (1 No.) (Table-1). The present documentation was mainly based on interviews with local inhabitants of the study area. They utilize these grasses for the preparation of different medicinal formulations to cure various ailments like stomach-ache and gastric disorders, dysentery, head-ache, piles, fever, rheumatic pain, cuts and wounds etc., Among these 15 species, the species like *Chrysopogon aciculatus* (Retz.) Trin., *Oryza sativa* L., *Panicum repens* L., *Paspalum scrobiculatum* L., *Saccharum officinarum* L. and *Setaria pumila* (Poir.) Roem & Schult. are used by the combination with other species. Out of these, the species like *Coix lacryma jobi* L., *Oryza sativa* L. and *Saccharum officinarum* L. shows edible potentiality. Moreover *Oryza sativa* L. is one of the staple food of the country. *Saccharum officinarum* L. and *Vetiveria zizanioides* (L.) Nash. are the two species which possesses immense economic potentiality. The various parts of these medicinal grasses like Leaves, Stem, Roots, Rhizome, Seeds, Whole plant and Seeds are used for the preparation of various medicinal formulations. Similar studies were also conducted by Anshuman *et al*., [8]. They conducted the survey in different parts of West Bengal to provided information on medicinal uses of grasses by the residing tribal people for the treatment of various ailments in their daily life. Their studies also highlights value of traditional knowledge system for the healthcare practices of tribal populations in our country.

According to Dashora and Gosavi [9], many grasses hold the medicinal value and are a repository of some unique medicinal properties. Man had been using these grasses in various forms from cultivating the cereals like the rice, wheat and maize and millets for food, sugarcane for sugar and jaggery. The bamboo grass, with its woody stem, is ideal as building material and also for making paper. Lemon grass is used to perfume soaps and to flavor curries. Other grasses are used for making thatches for huts. They also highlights, it is very essential to identify such important grasses and develop a strategy for their proper conservation.

Fig. 1. Map India showing Kerala

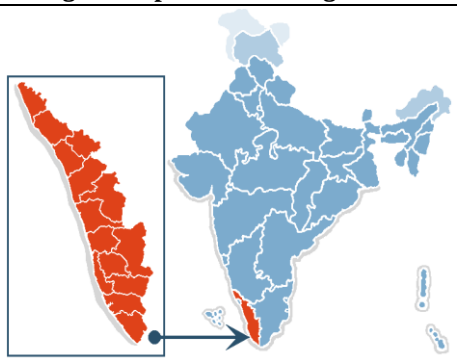

Fig. 2. Map Thrissur District

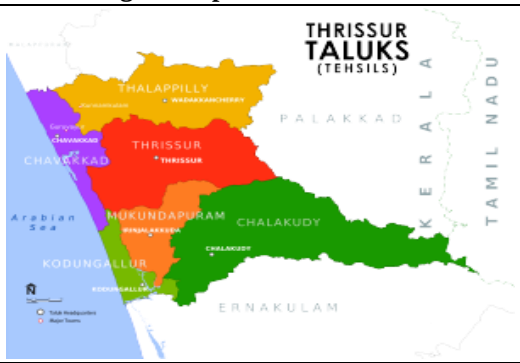

Plate-1

A) *Chrysopogon aciculatus* (Retz.) Trin.

B) *Cymbopogon flexuos* Nees *ex* Steud

C) *Echinochola colona* (L.) Link.

D) *Heteropogon contortus* (L.) P.Beauv

E) *Paspalum scrobiculatum* L.

F) *Setaria pumila* (Poir.) Roem & Schult.

CONCLUSION

The present study concludes that most of the local inhabitants are unaware of medico-potentiality of native grasses and they are deteriorating the habitat for firewood, livestock feeding and construction of roads and buildings. But some of them are having knowledge on the medico-potentiality of some herbs in their surroundings. Hence the present study also recommended that the local inhabitants of the study area should be trained to protect these grasses by using *In situ* conservation strategies for long term sustainability. More over the medico-potentiality regarding these plants and their uses has to be assessed and put to use in modern medicine after the detailed pharmacological studies.

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