World Journal of Pharmaceutical Sciences
ISSN (Print): 2321-3310; ISSN (Online): 2321-3086
Available online at: http://www.wjpsonline.org/
Short Communication

Grasses of T.D.M.N.S College Campus, T. Kallikulam, Tirunelveli District, Tamilnadu, India

J. Jeba Stella* and G. Vijaya

Assistant Professor, Department of Botany, T.D.M.N.S College, T. Kallikulam

Received: 04-04-2020 / Revised Accepted: 22-04-2020 / Published: 01-05-2020

ABSTRACT

The work deals with the studies on grasses of T.D.M.N.S College campus, T.kallikulam, Tamilnadu, India. A total of 36 genera under 6 tribes were recorded. Grasses were collected by regular field visit during June 2019 to April 2020. Of these 36 genera of grasses represented by 6 tribes such as Paniceae, Andropogoneae, Cynodonteae, Eragrostideae, Aristideae and Oryzae The tribe Paniceae was found to be the dominant class in the study area. This study provides baseline information on the grasses of the study area.

Keywords: Grasses, Poaceae, T.D.M.N.S College, Tamil Nadu

Address for Correspondence: J. Jeba Stella, Assistant Professor, Department of Botany, T.D.M.N.S College, T. Kallikulam, Tamilnadu, India; Email: jebastella1988@gmail.com

How to Cite this Article: J. Jeba Stella and G. Vijaya. Grasses of T.D.M.N.S College Campus, T. Kallikulam, Tirunelveli District, Tamilnadu, India. World J Pharm Sci 2020; 8(5): 67-69.

INTRODUCTION

India is one of the biologically richest tracts in the world and ranked sixth among the 12 Global mega - biodiversity countries (1). Though, the land surface covers 2.2% of the global area, the country exhibits 5-6% of the known living organisms, which include 10% of the world flora. The country is also ranked fourth in Biodiversity richness and cultural diversity together and having vast indigenous knowledge systems (2). India is known to comprise of 261 genera including 1,334 species (3) of which 42 genera are exclusively endemic to peninsular India (4).

Grasses are very important group of plants not only to human beings but also to animals. The family poaceae has been poorly documented in many Indian floras and a comprehensive systematic study on grass flora of India has not been made yet. Only few revisionary studies (5-7)were carried out in India.

Grasses are unique among flowering plants due to the extreme reduction, profound modification, complexity of microscopic reproductive parts and parallel evolution of various morphological characteristics, which cause difficulties in grass taxonomy and becomes 'marginalized' in systematic studies especially in countries like India. Grasses exhibit cosmopolitan distribution, ranging from polar regions to the equator, except in some forest types and they form almost 25% of the earth vegetation (8).

Although grasses are very important to human being, they are neglected by botanists due to their small modified flower, complicate inflorescence spikelets and special terminology. The present study was aimed to survey the grasses of T.D.M.N.S College Campus, T. Kallikulam, Tamilnadu, India.

MATERIALS AND METHODS

TDMNS College is located about 7km West of Vallioor (Latitude: 8.356413 and Longitude: 77.651907; elevation 73.66m) the Capital of Tirunelveli district, Tamilnadu. The total area of the college is about 41 acres of land area and is encompassed by a wall around it. The district receives the rainfall from October to the middle of January. During the southwest monsoon season the rainfall is more in the western parts of the district. The average annual rainfall over the district is 879mm.

Extensively regular field surveys were conducted from June 2019 to April 2020 to record and collect the Poaceae members from the study area. Initial identification was done by using the Flora of Tamilnadu- Grasses (9) and Flora of the Presidency of Madras (10).

RESULTS AND DISCUSSION

Throughout the present study a total of 36 genera fewer than 6 tribes were recorded from the TDMNS College campus. Among these Paniceae is the most diversified tribe on the basis of genera and species number followed by Andropogoneae, Cynodonteae, Eragrostideae and Aristideae. Oryzae represents by only one species.

Table-1 List of grasses collected from TDMNS College, T,Kallikulam

S.NO	Species	Tribe	Common name
1	*Aristida hystrix* L.f	Aristieae	Oosi pul
2	*Alloteropsis cimicina*(L.)stapf	Paniceae	Summer grass
3	*Aristida setaceae* Retz.	Aristieae	Wire grass
4	*Apluda mutica* L.	Andropogoneae	Manda pul
5	*Axonopus compressus*(sw.)P.Beauv	Paniceae	Black Blanket grass
6	*Brachiaria reptans*(L.)C.A.Gardner	Paniceae	Shani pullu
7	*Brachiaria ramosa*(L.)A.Camus	Paniceae	Sanam pullu
8	*Brachiara munae* Basappa	Paniceae	Signal grass
9	*Bothriochloa pertusa*(L.)A.Camus	Andropogoneae	Indian blue grass
10	*Chloris inflata* Link	Cynodonteae	Air port grass
11	*Chloris montana* Roxb.	Cynodonteae	Rhodes grass
12	*Cynodon dactylon* (L.)Pers.	Cynodonteae	Arugam pullu
13	*Chloris barbata* sw.	Cynodonteae	Swollen finger grass
14	*Chrysopogon fulvus*(Spreng.)Chiov	Andropogoneae	Guria grass
15	*Cyrtococcum trigonum*(Retz.)A.Camus	Paniceae	Shortleaf cyrtococcum
16	*Digitaria bicornis* (Lam.)Roem&Schult	Paniceae	Figer grass
17	*Dactyloctenium aegyptium*(L.)willd	Eragrostideae	Crow foot grass

18	*Eragrostis viscosa*(Retz.)Trin	Eragrostideae	Love grass
19	*Echinochloa colonum*(L.)Link	Paniceae	Jungle grass
20	*Eleusine indica* (L.)Gaertn.	Eragrostideae	Indian goose grass
21	*Heteropogon contortus*(L.) P.beauv.ex.Roem&Schult	Andropogoneae	Spear grass
22	*Manisuris myuros* L.	Andropogoneae	Itch grass
23	*Oryza sativa L.*	Oryzae	Asian rice
24	*Oplismenus compositus*(L.)P.Beauw	Paniceae	Running mountain grass
25	*Pennisetum purpureum* schumach.	Paniceae	Napier grass
26	*Panicum repens* L.	Paniceae	Torpedo grass
27	*Perotis indica* (L.)kuntze	Cynodonteae	Indian comet grass
28	*Pennisetum polystachyon* (L.)schult.	Paniceae	Mission grass
29	*Setaria Pumila* (Poir.)Roem&schult	Paniceae	Yellow fox tail
30	*Saccharum spontaneum* L.	Andropogoneae	Kans grass
31	*Sorghum nitidum*(vahl)Pers.	Andropogoneae	Durra
32	*Sporobolus tenuissimus* (Schrank.)kuntze	Eragrostideae	Tropical drop seed
33	*Trachys muricata* (L.)Pers.	Paniceae	Buffer grass
34	*Tragus roxburghii* Panigrahi	Cynodonteae	Indian bur grass
35	*Themeda triandra* Forssk	Andropogoneae	Kangaroo grass
36	*Zea mays* L.	Andropogoneae	Maize

Among the recorded grasses, 2 of them were encompass food values, 15 as fodder, 7 as ornamental, 4 as medicinal, 3 as soil binder and 4 of them were used to take paper bulb. Paddy straw is considered to be good fodder for the cattle, but with the increasing number of cattle natives are searching for substitute. In 49 taxa of grasses reported from the area, major of grasses are used as fodder grass (11). In this view grasses such as *Alloteropsis cimicina*, *Apluda mutica*, *Brachiaria ramosa*, *Brachiaria reptans*, *Chrysopogon fulvus* and *Eragrostis viscosa* are commonly consumed by domesticated animals. *Sorghum nitidum*, and *Zea mays* were cultivated in the study area for their edible and nutritious grains. Hardly ever the seeds of *Dactyloctenium aegyptium* and *Eleusine indica* were consumed at the time of scarcity. *Aristida setaceae*, *Heteropogon contortus* and *Sacchrum spontaneum* were also collected for the manufacture paper. *Cynodon dactylon* was used to grow in lawns. *Dactyloctenium aegyptium*, *Pennisetum purpureum*, *Cynodon dactylon*, and *Saccharum spontaneum* possessed abundant medicinal values. Some of the grasses are cultivated in the campus for their ornamental values.

Acknowledgement: The authors are thankful to the Principal, Head of the Department of Botany and the management of TDMNS College, T.Kallikulam for granting permission to undertake this study.

REFERENCE

1. Nayar, M.P. *Hotspots of endemic Plants of India, Nepal, and Bhutan.* Tropical Botanic Garden and Research Institute, Palode, Thiruvananthapuram,1996.
2. Cunningham H.M, *Environmental science - A global concern.* McGraw-Hill Inc., London.2003.
3. Karthikeyan,S. Common tropical and sub tropical sedges and grasses:an illustrated account:review.Rheedea, 2005;15:141-142.
4. Mitra,S. and Mukherjee,S. Plants used as Ethnoveterinary Medicine in Uttar and Dakshin Dinajpur District of West Bengal, India: In :*Advances in Ethnobotany* (Edited by A.P.as &A.K.Pandey). Bishen singh Mahendral Pal Singh, Dehradun, 2007
5. Jain, S.K. Notes on Indian grasses. VI. The genus *Cynodon* Rich. ex Pers. in India. *Bull. Bot. Surv. India,* 1967a 9: 134-154.
6. Sur, P.R. A revision of the genus *Ischaemum* Linn. (Poaceae) in India. *J. Econ. Taxon. Bot.*2001,25 (2): 407-438.
7. Sur, P.R. A taxonomic revision of the genus Lophopogon Hack. (Poaceae) in India. *J. Econ. Taxon. Bot.*2004,28 (3): 545-548.
8. Heywood, V. H, Brummitt R.K, Culham.A and Seberg.O .Flowering Plant families of the World. *Royal Botanic Gardens*, Kew.2007.
9. Kabeer, K.A.A. and Nair,V.J. Flora of Tamil Nadu Grasses. Botanical Survey of India, Howrah,2009: 380.
10. Gamble, J.S. and Fishcer C.E.C. The flora of the presidency of Madras Adlard &Son Ltd.,London.1935
11. Rama,R.S and Murugesan A.G .Grass Flora From Plains Of Radhapuram Taluk, Tirunelveli District, Tamilnadu, *Indian Forester* 2017:143(11):1160-1163.