



**Floristic Composition and Indigenous Uses of Poaceae and Cyperaceae Family in Bolpur-Santiniketan**

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**ABSTRACT**

The grass family (Poaceae or Gramineae) is the fourth largest flowering plant family and contains approximately 11000 species in 800 genera worldwide. Grasses are frequently distributed. Grasses are adapted to all habitats. The present study describes the floristic diversity of Poaceae and Cyperaceae family in Bolpur-Santiniketan area of West Bengal, India. Each plant species was collected, dried and mounted on the herbarium sheet and was identified. A total of sixteen grass species were found in Bolpur-Santiniketan area of West Bengal

**Key Words:**

*Grasses, herbarium, survey*

**INTRODUCTION**

The role of systematic in studies of biodiversity is essential to a variety of studies, including species conservation, extinction, biodiversity hotspots, bio-prospecting and ecosystem function (Alroy 2002; Smith and Wolfson 2004; Wilson 2000). Plant collection and field preparation of specimens are the fundamental aspects of study, training and research in plant systematic. Herbarium specimens represent a rich source of information for botanists and taxonomists. Documentation of the species is very important aspect in the field of the taxonomy as well as for further scientific research.

Plant communities dominated by Poaceae are called grasslands. It is estimated that they comprise twenty percent of the vegetation that covers the earth. Most of the grasses are considered to be invasive. Only Asteraceae

(compositae), Fabaceae (Leguminosae) and Orchidaceae contain more species than poaceae. Grasses are among the most adaptable life forms. The name Poaceae was given by John Hendley Barnhart in 1895, based on the tribe poeae described in 1814 by Robert Brown, and the type genus poa described in 1753 by Carl Linnaeus. Grasses (Poaceae or Gramineae) are the fifth most diverse family among the flowering plants or Angiosperms (Watson and Dallwitz 1992) and the second most diverse family among the Monocotyledons. The members of the family are widespread in all climates and regions. The family is closely related with Cyperaceae. Poaceae comprises about 10,000 species in approximately 700 genera (Watson and Dallwitz 1992), distributed widely throughout the world. About 239 genera and 1,180 species are found in India. According to the latest update of the kew world grass species database, 10805 species are reported (Simon 2007).

Cyperaceae is a cosmopolitan family of an estimated 5000 species and 100 genera (Ball et al. 2002). Members of the Cyperaceae are commonly called sedges. The order Cyperales is the second largest order of the monocotyledons next to Orchidales. The Cyperales as defined by Cronquist comprises two families the gramineae (Poaceae) and the Cyperaceae. The rules of priority promoted Cronquist (1968) to name the order as Cyperales in place of Poales.

The Cyperaceae and Poaceae are large and successful family having small and inconspicuously reduced flowers. The families consist of perennial or annual, generally tuft herbs with fibrous root or they may possess a creeping rhizome. The Cyperaceae along with gramineae (Poaceae) is placed in the series blumaceae by Bentham and Hookers- on the basis of that in both the families the flowers are subtended by glumaceous bract.

Poaceae is economically the most important family use as food, fodder and for soil conservation. The family Poaceae is of great importance in terms of human life and civilization. The Cereal crops such as maize, wheat, rice, barley, and millet were domesticated from this family. Poaceae the most economically important plant family in modern times, providing forage, building materials (bamboo, thatch), and fuel (ethanol) as well as food. Many grasses are used in lawns. Except some Poaceae taxa used in perfume sector (Clayton and Renvoize 1986). Domestic animals are fed on forage grasses.

The present was planned with the objectives to explore, identify and document grasses species diversity of the bolpur area. Through this studies, valuable data about the grasses is recorded which could be used as

reference for future studies.

## STUDY AREA

Bolpur-Santiniketan is a municipality and headquarters of Bolpur subdivision in Birbhum district in West Bengal, India which is floristically very rich. It is located at 23° 40' 0" North, 87° 43' 0" East.

## MATERIALS AND METHODS

Present investigation deals with grasses species under different genera belonging to different families of angiosperm. During transect field survey all grass species appearing different were collected. Plant specimens were brought to lab and were pressed, properly, dried and identified. The flowering twigs of plants were collected and identified from our department consulting the latest floras and experts and subsequently these were compared with the departmental Herbarium for correct identification. The identified plant specimens were placed in thin paper folders (species cover), which are kept together in thicker paper folders (genus covers), and finally they were in the herbarium cupboards.

## RESULTS

The Poaceae and Cyperaceae family is one of the most economically and ecologically important families in the world. The study revealed that the family Poaceae is represented in the Bolpur-Santiniketan area in 16 genera. The habit, habitat, the morphology of the plants, family, genera and species were recorded. These plants are described according to their common name, botanical name, family and their uses. The details of different uses of plants were noted with the help of literature collected using authentic sources.

**Table 1.** List of locally available Poaceae family

Sl. No.	Botanical name	Common name	Family	Uses
1.	<i>Leptochloa digitata</i> (R.Br.) Domin.		Poaceae	
2.	<i>Dichanthium annulatum</i> (Forssk.) Stapf	Marvel grass	Poaceae	Used as food and fooder, control soil erosion.
3.	<i>Eragrostis pilosa</i> (L.) P. Beauv.	Hairy love grass	Poaceae	Used as forage and fooder.
4.	<i>Chrysopogon aciculatus</i> (Retz.) Trin.	Lesser spear grass	Poaceae	Used as lawngrass, control of soil erosion.
5.	<i>Sporobolus diander</i> (Retz.) Beauv.		Poaceae	Used as food and fooder.
6.	<i>Pennisetum pedicellatum</i> Trin.	Deenanath grass	Poaceae	Used as fooder.
7.	<i>Dactyloctenium aegyptium</i> (L.) Willd	Crowfoot grass	Poaceae	Used as food.
8.	<i>Oplismenus composites</i> (L.) P. Beauv.	Running mountain grass	Poaceae	Used as lawngrass and edible to livestock.
9.	<i>Oplismenus burmannii</i> (Retz.) P. Beauv.	Burmans' basket grass	Poaceae	Used as painkiller, eye treatments, depressants, fooder etc.
10.	<i>Brachiaria plantaginea</i> (Link) Hitchc.		Poaceae	Used as forage crop.

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