

Chapter 14

Some common grass species of Cuttack district, Odisha, India

Sugimani Marndi*, Sweta Mishra and Sanjeet Kumar

Biodiversity and Conservation Lab., Ambika Prasad Research Foundation, Odisha, India

*Email-Id: sugimani2marndi@gmail.com

Abstract: Grasses form a vital component of the vegetation in tropical regions, providing fodder, soil stabilization, and ecological services. A survey for grasses in Cuttack district, Odisha, India, revealed the presence of 31 common grass species belonging to 22 genera and occupying varied habitats such as roadsides, open grasslands, agricultural fields, marshy areas, and riverbanks. Species like *Cynodon dactylon*, *Imperata cylindrica*, and *Saccharum spontaneum* were observed to dominate disturbed and moist areas, while others such as *Bothriochloa bladhii* and *Pennisetum pedicellatum* were frequent along roadsides. This documentation offers baseline data for grassland management, conservation, and sustainable utilization in the region.

Keywords: Grassland, conservation, Mahanadi areas, agricultural field, ecological services

Introduction

Grasses belonging to family Poaceae, are among the most widely distributed and ecologically significant plant groups on Earth (Saxena and Brahman, 1996; Behera et al., 2025). They serve as primary fodder resources (Sethi et al., 2024), contributing to soil binding, and plays key roles in nutrient cycling. They have economic (Sharma et al., 2025), food (Dimri et al., 2024), medicinal (Mishra et al., 2022) and ornamental values (Hamar-Farkas et al., 2024). In India, grasslands and roadside vegetation harbour a rich diversity of species that sustain rural livelihoods and local ecosystems. Cuttack district, situated on the banks of Mahanadi and Kathajodi rivers of Odisha, is characterized by fertile alluvial plains, tropical monsoon climate, and is a mosaic of agricultural lands, wetlands, and urbanized areas. Despite the ecological and economic values, the grasses of this district remain under-documented. This chapter presents an inventory of commonly occurring grass species of Cuttack, highlighting their vernacular names and habitat preferences to facilitate further ecological studies and conservation efforts.

Materials and methods

Extensive field surveys were conducted across different habitats of Cuttack district like roadsides, wastelands, grasslands, agricultural fields, marshy areas, and riverbanks during

2024-2025. Species were identified by the authors followed by published literature (Behera et al., 2025). Vernacular names were recorded through interactions with local communities and available database (Kumar, 2025).

Results and discussion

The field survey recorded 31 common grass species belonging to 22 genera across diverse habitats of Cuttack district (Table 1). Their distribution reflects remarkable ecological adaptability (Figure 1). *Alloteropsis cimicina*, *Bothriochloa pertusa*, *Chloris barbata*, and *Eragrostis tenella* dominate disturbed soils, thriving with frequent human activity and vehicular dispersal. Moisture-loving taxa, including *Echinochloa colonum*, *Eragrostis unioloides*, and *Setaria verticillata*, were concentrated near the Mahanadi River and in low-lying wetlands, where seasonal flooding provides ideal conditions. *Panicum sumatrense*, *Perotis indica*, and *Setaria flavida* were abundant in open fields and fallow lands, demonstrating resilience to nutrient-poor substrates. *Imperata cylindrica* and *Saccharum spontaneum* play a vital ecological role by stabilizing riverbanks and preventing soil erosion. Economically important species like *Cynodon dactylon* emphasize the need for conserving grass habitats to sustain biodiversity, soil health, and rural livelihoods.

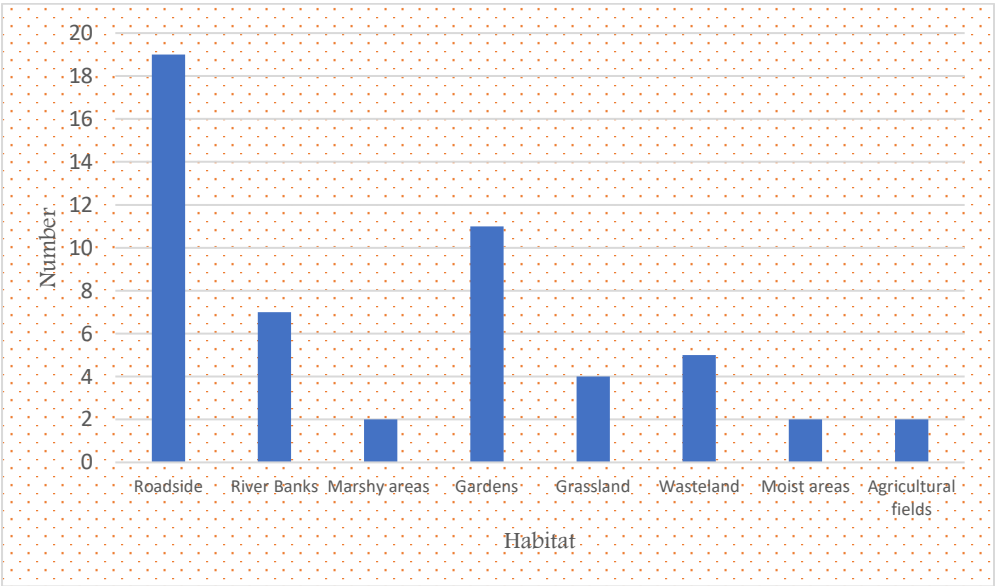


Figure 1: Diversity and habitat of grass species in Cuttack, Odisha

The bar graph illustrated that roadside habitats harbour the highest species richness, followed by riverbanks and moist areas, reflecting the adaptability of grasses to disturbed and periodically flooded environments (Figure 1).



Figure 2: Habitat of *Alloteropsis cimicina*



Figure 3: Inflorescence of *Aristida setacea*



Figure 4: Inflorescence of *Bothriochloa bladhii*



Figure 5: Inflorescence of *Bothriochloa pertusa*



Figure 6: Habitat of *Chloris barbata*



Figure 7: Inflorescence of *Chrysopogon aciculatus*



Figure 8: Inflorescence of *Chrysopogon zizanioides*

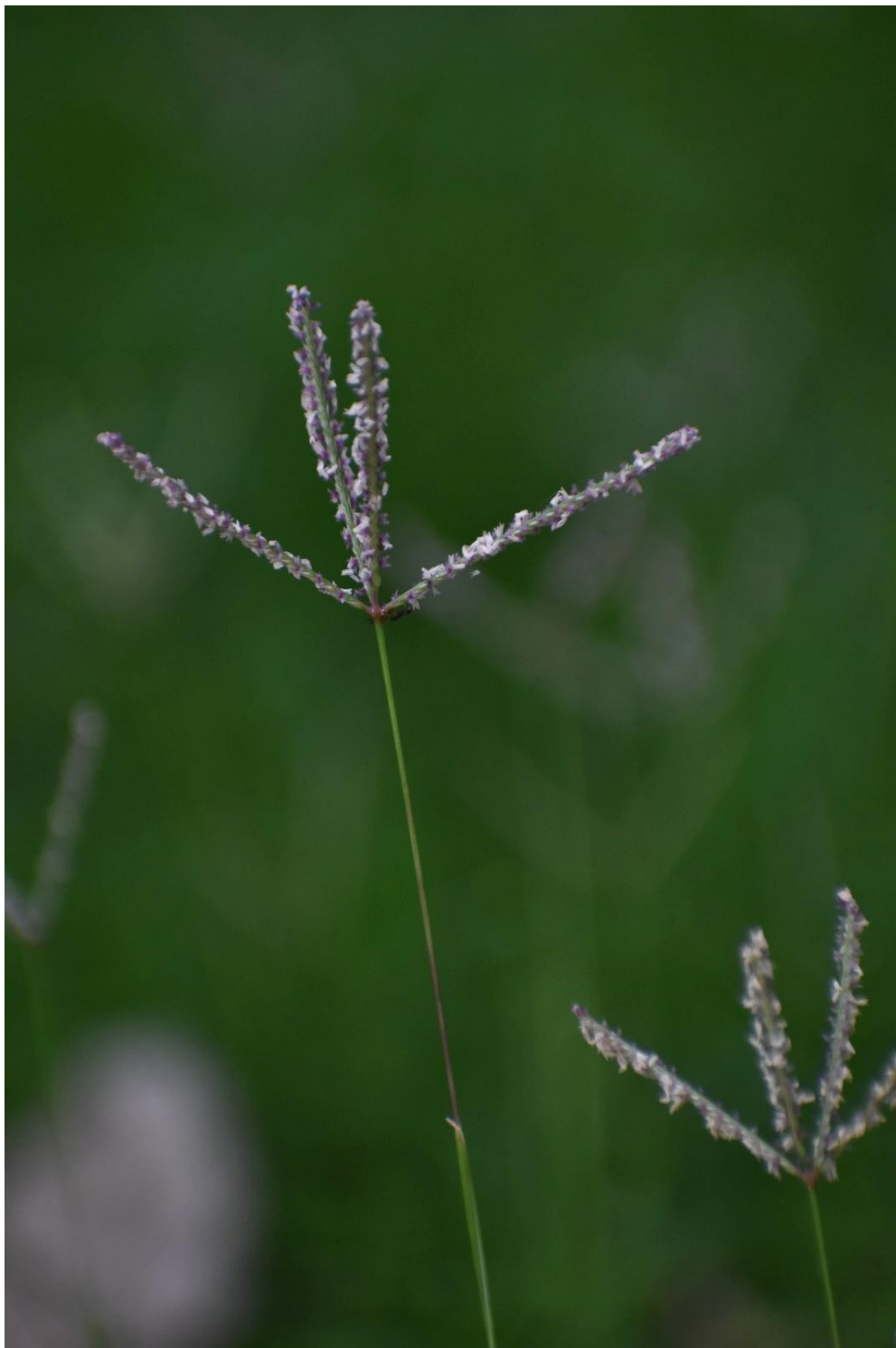


Figure 9: Inflorescence of *Cynodon dactylon*



Figure 10: Inflorescence of *Dactyloctenium aegyptium*



Figure 11: Inflorescence of *Digitaria bicornis*



Figure 12: Inflorescence of *Echinochloa colona*



Figure 13: Inflorescence of *Imperata cylindrica*

Table 1: Common grass species of Cuttack, Odisha, India

Name	Vernacular name	Habitat
<i>Alloteropsis cimicina</i> (Figure 2)	Bada Borati Ghasa	Roadside
<i>Apluda mutica</i>	Mugar Ghasa	Open grassland
<i>Aristida setacea</i> (Figure 3)	Jhadu Ghasa	Roadside and near Mahanadi River
<i>Bothriochloa bladhii</i> (Figure 4)	Gandhabena	Roadside
<i>Bothriochloa pertusa</i> (Figure 5)	Basana	Roadside
<i>Chloris barbata</i> (Figure 6)	Gajalekha	Roadside
<i>Chrysopogon aciculatus</i> (Figure 7)	Guguchia	Roadside & wasteland
<i>Chrysopogon zizanioides</i> (Figure 8)	Bena	Roadside, near water bodies & near Mahanadi River
<i>Cynodon dactylon</i> (Figure 9)	Duba	Roadside, grassland, agricultural fields & gardens
<i>Dactyloctenium aegyptium</i> (Figure 10)	Kukudia	Wasteland
<i>Digitaria bicornis</i> (Figure 11)	Mukurjali	Wasteland
<i>Digitaria ciliaris</i>	Chiri-Chiri	Roadside & gardens
<i>Echinochloa colona</i> (Figure 12)	Suan	Moist areas & gardens
<i>Eleusine indica</i>	Nandia	Wasteland & gardens
<i>Eragrostis ciliaris</i>	Gajalakha	Roadside
<i>Eragrostis tenella</i>	Dauria	Roadside
<i>Eragrostis unioloides</i>	Phurphuri	Moist areas
<i>Imperata cylindrica</i> (Figure 13)	Dabbu	Marshy areas, gardens & near Mahanadi River
<i>Oplismenus burmanni</i>	Kaugodia	Roadside & gardens
<i>Oplismenus compositus</i>	Mohara	Roadside & gardens
<i>Panicum repens</i>	Reda	Roadside & near Mahanadi

<i>Panicum sumatrense</i>	Suan	Grassland & gardens
<i>Paspalum scrobiculatum</i>	Koda	Roadside
<i>Pennisetum pedicellatum</i>	Dinabandhu	Roadside & near Mahanadi River
<i>Perotis indica</i>	Nakka	Grassland & wasteland
<i>Saccharum spontaneum</i>	Kasatandi	Marshy areas & near Mahanadi River
<i>Setaria flavida</i>	Juna	Roadside & gardens
<i>Setaria pumila</i>	Siala	Gardens & agricultural fields
<i>Setaria verticillata</i>	Baunsa ghasa	Near Mahanadi River
<i>Sporobolus diandrus</i>	Kakarchada	Roadside
<i>Urochloa distachyos</i>	Dhanri	Roadside

Conclusion

The grasses of Cuttack district exhibit remarkable diversity and habitat adaptability, ranging from dry roadsides to marshy riverbanks. Many species hold ecological, medicinal, and economic significance, particularly for fodder and soil stabilization. Documentation of such species provides essential baseline data for conservation strategies, sustainable grazing management, and future ecological research in the dynamic landscapes of Odisha.

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