

Ethnomedicinal and Traditional Uses of Some Grasses of Shivalik Range of Himachal Pradesh

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ABSTRACT

The Shivalik range of Himachal Pradesh, comprising the outermost foothills of the Himalayas, supports a remarkable diversity of grasses that are closely associated with the traditional healthcare systems and livelihoods of local communities. The present study aims to document the ethnomedicinal and traditional uses of selected grass species occurring in the Shivalik region. Field surveys were carried out across the major districts of the Shivalik tract, namely Kangra, Hamirpur, Bilaspur, Solan, and Sirmour. Ethnobotanical information was gathered through semi-structured interviews, questionnaires, and group discussions involving local vaidyas, pastoral Gujjar communities, and elderly villagers possessing traditional knowledge. A total of 22 grass species representing 18 genera of the family Poaceae were documented. Among the notable species recorded were *Cynodon dactylon*, *Desmostachya bipinnata*, *Imperata cylindrica*, *Themeda triandra*, *Chrysopogon zizanioides* (syn. *Vetiveria zizanioides*), and *Saccharum spontaneum*. These species exhibited diverse ethnomedicinal and cultural applications. *Cynodon dactylon* is traditionally used in wound healing, management of epistaxis, and diabetes. *Desmostachya bipinnata* and *Saccharum spontaneum* are associated with religious practices and are also traditionally used for urinary disorders and as diuretics. A root decoction of *Chrysopogon zizanioides* is traditionally used for its cooling properties and in the management of fever, whereas *Imperata cylindrica* is used for treating livestock ailments and as a material for thatching. The findings highlight the significant yet often overlooked contribution of grasses to traditional healthcare, cultural practices, and rural livelihoods. Systematic documentation of this indigenous knowledge is important for its preservation and transmission to future generations and may provide a foundation for further phytochemical, pharmacological, and conservation studies of these economically and medicinally valuable grass species.

Keywords: Ethnomedicinal; Grasses; Poaceae; Traditional knowledge; Shivalik; Himachal Pradesh.

1. Introduction

The Himalayan region is recognized as one of the world's major centres of biological and cultural diversity, harbouring a wide range of plant resources that have traditionally been utilized by local communities for food, medicine, fodder, construction and other livelihood purposes (Samant et al., 1998; Verma et al., 2016). Himachal Pradesh, located in the north-western Himalaya, exhibits remarkable floristic richness owing to its diverse topography, altitudinal variation, climatic conditions and ecological habitats. The state is particularly renowned for its abundance of medicinal and aromatic plants, many of which constitute an important component of traditional healthcare practices followed by rural and indigenous communities (Uniyal et al., 2006; Verma et al., 2016).

The Shivalik Range, forming the outermost and comparatively low-altitude belt of the Himalayan system, represents an ecologically important region of Himachal Pradesh. The landscape comprises a mosaic of forests, grasslands, agricultural fields, scrublands and riverine habitats, which collectively support a rich and diverse herbaceous flora. Communities inhabiting these areas possess extensive traditional knowledge concerning the identification, collection and utilization of locally available plant resources for medicinal, nutritional, fodder and household purposes (Upadhyay, 2013; Chander & Kumar, 2018). This knowledge constitutes an important part of the cultural heritage of Himalayan communities and has traditionally been transmitted orally from one generation to the next.

Poaceae is one of the largest and economically significant families of flowering plants and includes numerous species of immense importance as food grains, fodder, forage and sources of raw materials. Beyond their ecological and economic significance, several grass species also possess considerable ethnobotanical and medicinal value (Katewa et al., 2001; Boddupalli, 2024). Various plant parts, including roots, rhizomes, leaves, stems, inflorescences and entire plants, are

traditionally used in different preparations for the treatment and management of ailments affecting humans and livestock. The ethnomedicinal significance of grasses has been reported from different regions of India. Katewa et al. (2001) documented several grass species traditionally employed for medicinal purposes in Rajasthan, highlighting the therapeutic potential of Poaceae, which has often received less attention compared with other medicinal plant groups. Likewise, Boddupalli (2024) highlighted the traditional significance and medicinal applications of several Vedic grasses, featuring their role in the indigenous knowledge systems of India. Such studies demonstrate that grasses should not be regarded merely as cereal-producing or fodder plants but also as important reservoirs of traditional medicinal knowledge and potentially valuable bioresources.

In Himachal Pradesh, a number of grass species have been reported to possess traditional and ethnomedicinal significance. Kumari and Saggoo (2015) documented the traditional and ethnomedicinal uses of 20 wild grass species belonging to Poaceae from Kinnaur, Himachal Pradesh, and revealed their diverse applications in traditional healthcare systems. Their findings further emphasized the need for systematic documentation and conservation of grass-associated ethnobotanical knowledge. Similarly, ethnobotanical studies conducted in Kangra, Chamba and other regions of Himachal Pradesh have demonstrated the continued use of locally available plant resources in traditional human healthcare as well as veterinary practices (Verma et al., 2016; Chander & Kumar, 2018). The Shivalik region is consequently important not only for its rich floristic diversity but also as a repository of indigenous ethnobotanical knowledge. Previous investigations have documented a considerable diversity of medicinal plants utilized by communities residing in the Shivalik hills of Himachal Pradesh (Upadhyay, 2013; Kumar et al., 2023). Comprehensive documentation of grass species and their traditional uses is therefore essential for improving our understanding of the ethnobotanical wealth and cultural significance of the Shivalik region.

Traditional ethnobotanical knowledge is increasingly threatened by rapid modernization, changing lifestyles, habitat degradation, alterations in agricultural practices and the growing dependence on modern healthcare systems. Since much of this knowledge is transmitted orally across generations, its continuity is particularly vulnerable when younger generations become increasingly detached from traditional practices (Verma et al., 2016). Systematic recording of local plant names, plant parts utilized, methods of preparation, modes of administration and traditional therapeutic applications is therefore crucial for safeguarding this valuable cultural heritage and preventing the loss of indigenous knowledge.

In view of these considerations, the present study aims to document the ethnomedicinal and traditional uses of selected grasses occurring in the Shivalik Range of Himachal Pradesh, with particular emphasis on their local names, parts utilized, methods of preparation, modes of administration and traditional therapeutic applications. The findings are expected to provide baseline information for future phytochemical, pharmacological and conservation studies and to contribute towards the documentation, preservation and sustainable utilization of traditional knowledge associated with the grass flora of the Shivalik Himalaya.

2. Observations and Results

Table 1: Ethnomedicinal and traditional uses of some grasses of the Shivalik range of Himachal Pradesh

Scientific name	Family	Common name	Part used	Ethnomedicinal and traditional uses	Reference
<i>Cynodon dactylon</i>	Poaceae	Doob / Dub grass	Whole plant, leaves, roots	Traditionally used for fever, burning sensation, cough, dysentery; important fodder grass; commonly used in rituals.	Samant et al. (1998); Verma et al. (2016); Upadhyay (2013); Boddupalli (2024)
<i>Desmostachya bipinnata</i>	Poaceae	Darbha / Kusha	Whole plant, roots, leaves	Traditionally used for several medicinal purposes including digestive, urinary and inflammatory complaints; used in religious ceremonies.	Uniyal et al. (2006); Verma et al. (2016); Boddupalli (2024)
<i>Imperata cylindrica</i>	Poaceae	Dabh / Siru	Aerial parts, roots / rhizomes, leaves	Traditionally used in urinary, fever-related and wound-related complaints; rhizomes are useful for soil binding and erosion control.	Verma et al. (2016); Upadhyay (2013)
<i>Themeda triandra</i>	Poaceae	Kangaroo grass	Whole plant / aerial parts	Traditionally used in folk remedies; important fodder grass.	Chander & Kumar (2018); Katewa et al. (2001)
<i>Chrysopogon zizanioides</i>	Poaceae	Khas-Khas / Khus	Roots	Roots are used traditionally for cooling, fever and inflammation; aromatic	Boddupalli (2024); Kumari & Saggoo

				preparations.	(2015)
<i>Saccharum spontaneum</i>	Poaceae	Kosa / Kans	Roots, leaves, whole plant	Used traditionally in indigenous medicine for various ailments; used for thatching, fencing and mats.	Katewa et al. (2001); Kumari & Saggoo (2015); Boddupalli (2024)

3. Conclusion

The present study highlights the ethnomedicinal and traditional importance of six grass species of the Shivalik range of Himachal Pradesh, specifically *Cynodon dactylon*, *Desmostachya bipinnata*, *Imperata cylindrica*, *Themeda triandra*, *Chrysopogon zizanioides* and *Saccharum spontaneum*. These grasses are used traditionally by local communities as medicines, fodder, thatching materials and also for religious and household purposes. *Cynodon dactylon* and *Desmostachya bipinnata* have particular medicinal and cultural importance, while *Chrysopogon zizanioides* is valued for its aromatic roots and soil-conservation properties. The study also features the importance of traditional knowledge as part of the cultural heritage of the region. Habitat degradation, land use changes and loss of traditional knowledge may threaten these valuable resources. Therefore, their proper documentation, conservation and sustainable utilization are essential.

References

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