

The Grasses of North-Eastern India

THE GRASSES OF NORTH-EASTERN INDIA

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FOREWORD

The grasses belonging to the family Poaceae (Gramineae), although is of great economic importance to the mankind has remained fairly neglected. One of the reason for this is due to an erroneous interpretation that it is a difficult group for identification. It is true that the 'spikelet' may often require dissection of the various parts for identification but to those engaged in working on this family, its study is quite fascinating.

The most notable work on the grasses of North-east India is by N.L. Bor (1940) 'Gramineae' under the *Flora of Assam*, (Vol. V). J.N. Mitra (1958) in the '*Flowering Plants of Eastern India*' Vol. I. *Monocotyledons* also covered this region, but practically it had nothing to add to the existing knowledge, till Bor's monumental work '*Grasses of Burma, Ceylon, India and Pakistan*' was published in 1960 (reprinted, 1973). But during the last 3 decades understanding of the grasses of this region has made many strides. It was, therefore, felt necessary to reassess the gathered knowledge on this family, which will also help to complete the Monocotyledonous Flora of the North-eastern India.

The present work 'Grasses of the North-eastern India' covers approximately 475 species, most of which are illustrated with the help of about 90 plates. This work has resulted in the award of Doctor of Philosophy to the author from the University of Calcutta, Calcutta; and has been an outcome of critical study of a large number of herbarium materials deposited in the Central National Herbarium, Howrah (CAL); Botanical Survey of India, Eastern Circle, Shillong (ASSAM); Northern Circle, Dehra Dun (BSD); Forest Research Institute, Dehra Dun (DD); National Botanical Research Institute (LWG) and Central Drug Research Institute (CDRI) both at Lucknow, as well as the collection made by the author alone or jointly with his guide Dr. S.K. Jain, Ph.D., F.N.A., ex-Director, Botanical Survey of India and now Emeritus Botanist, National Botanical Research Institute, Lucknow; from various parts of this region. During course of the study historical collections namely of Gustav Mann, Masters, Clarke, U.N. Kanjilal and his son P.C. Kanjilal, Bor etc. and recent collections made by the various officers of Botanical Survey of India, Forest Research Institute, several Forest officers and students of various Universities were also available for critical study.

It is hoped that this book will be useful to all those who are engaged in the study of this family, particularly of the this region, with its proper utilization for improvement of crop, fodder, soil conservation etc.

This work is a welcome contribution by the author. It will also serve as a valuable Reference literature for years to come for the taxonomists in this country and abroad.

PREVIEW

North-east India comprising the states of Arunachal Pradesh, Assam Manipur, Meghalaya, Mizoram and Tripura and spreading over an area of more than 250,000 sq. km. is the richest region in the diversity of flowering plants in India. Out of the estimated 17000 species of angiosperms of our country, about 7000 are known to occur in this region. Of these, Grasses belonging to the family Poaceae is second only to Orchidaceae. Poaceae is an important family and the utility of members like rice, wheat, barley, maize and sugar-cane needs no emphasis. Knowledge on the occurrence and distribution of the wild relatives of these cultivated plants is an absolute necessity to put them into use to improve disease resistant and high yielding varieties. Bamboos, the arborescent grasses, play a significant role in the lifestyle of the rural community in the North-east. Out of about 150 species of bamboos in India approximately 80 are distributed in this area. Grasses are also useful in various other ways.

Bor in 1940 wrote about this family in the fifth volume of the monumental work, 'The Flora of Assam' by Kanjilal *et al.* However, over the years, grass taxonomy has progressed a lot and many earlier generic and other concepts have changed. Thanks to the intensive explorations conducted by Botanical Survey of India in various parts of North-east India, considerable amount of materials and information on grasses have accumulated in our Herbaria making it essential to have a fresh detailed study of the group. The present book is the result of such an attempt by Dr. U. Shukla of the Eastern Regional Circle of Botanical Survey of India. The work was done under the able supervision of one of our eminent agrostologists and former Director, Botanical Survey of India, Dr. S. K. Jain, FNA.

'The Grasses of North-Eastern India' deals with about 475 species of the area most of which are illustrated by 90 plates. This work is based on the critical study of vast amount of herbarium materials including historical collections of early explorers like Craib, Gallatly, Griffith, Gustavmann, Clarke, Hooker and Thomson, Kingdon Ward, Bor and Kanjilal and recent collections deposited in various Indian herbaria and can be considered quite a good account of this difficult group.

It is hoped that this work will be of great use to anybody interested in grasses.

CALCUTTA
2nd September, 1995

P.K. Hajra
Director
Botanical Survey of India

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