

ABSTRACT

Udalguri district of Bodoland Territorial Area Districts (BTAD) Assam, India which is situated on the North Bank of Brahmaputra and its latitude and longitude are 26°30′-26°40′N and 92°15′-92°23′E respectively. The total geographical area is 1,852,16 km² (GIS). The district is bounded by Bhutan and West Kameng district of Arunachal Pradesh State in the North, Sonitpur district in the East, Darrang district in the South and Baksa district in the West. There are two sub-divisions viz. the Udalguri and the Bhergaon in the district.

According to statement of Reserve Forest (R.F.) and Proposed Reserve Forest (P.R.F.) under Dhansiri Forest Division, Udalguri district forest are Khalingduar R.F., Rowta R.F., Bhairabkunda R.F., Kundarbil P.R.F., Bhairabkunda P.R.F. and Barnadi Wildlife Sanctuary. Udalguri district is having Panchnoi, Phulguri, Dhansiri, Sukhajani, Golondi, Sapekhaiti, Chandana, Noanodi, Kulshik, Nonoi, Kalpani and Suklai rivers are the principal rivers come out from the Himalaya Mountains, which flows from North to South direction through it to keep the district green whole the year. Though the vegetation of Udalguri district is primarily of tropical and sub-tropical types. The tropical and the sub-tropical forest type of forest lies along the foot hills of Arunachal Pradesh with the common monocot species are *Musa sp.*, *Calamus sp.*, *Bambusa sp.*, some dominant grass species of family Poaceae, epiphytic species of family Orchidaceae and numerous species of family Dioscoreaceae, Araceae, Zingiberaceae, Cyperaceae, Poaceae are common in the forests and found to be scattered. There is a large number of Monocot plants due to its wide range of habitats. Our results indicate a rich Monocot flora in the Udalguri district, possibly due to the region's physiography of plain area and tropical to sub-tropical climate.

The population pattern also indicates wide range tribal localities mainly. The area supports rich ethnic diversity according to all 05 tribes inhabiting in different in different villages. The 05 tribes residing in the area are of Bodo, Rabha, Garo, Hajong and Deori; while the Bodo's form majority with distinct culture and tradition since time immemorial. These people living in remote area still depend upon to a great

extent on the indigenous system of medicine and cultivation. The Bodos and Rabhas are the scheduled tribes of Assam and they are belonging to the Indo-Mongoloid group of people and have similarities between them. Their traditional religion is animistic with rituals as its integral part. The village economy is based on agriculture and both men and women work in the field. Weaving cloths is also another important occupation and they prepare attires themselves for both men and women.

Studies on Monocot flora of Udalguri district BTAD, Assam with special reference to ethnobotany of Bodo and Rabha, were made by spot study, verification and collection of materials in the form of herbarium and the information regarding the utility of different Monocot plants in different purposes was collected by questionnaire, interview and discussion method among local elderly person, medicine men and religious headman in their local languages of some selected villages of Bodo and Rabha in the district for the general procedure of gathering the data.

The present study was carried out during 2014-2017 years in different Bodo and Rabha community areas to assess the traditional as well as locally used some monocot plants for various purposes in their life. During the course of the research work, a total of 228 species of Monocot plants belonging 133 genera under 30 families were recorded to be used by Bodo and Rabha community in different disciplines.

It is revealed that maximum number of species, out of 30 families, Poaceae (Gramineae) is found to be dominant with 50 genera and 70 species. And other four dominant families in order of sequence are recorded as Cyperaceae is 12 genera, 38 species; Zingberaceae is 07 genera, 15 species; Araceae is 10 genera, 15 species and Arecaceae is 09genera, 10 species.

The plants typically containing only one embryonic leaf or cotyledon are termed as Monocotyledons (Monocots). Monocot plants are easily observed and can identified in their morphological characters of roots fibrous; leaf venation parallel, radical, sessile; flowers trimerous; stems hollow, reduced to disc, false or pseudo stem and the pollen grain has a single furrow.

Review literature includes past botanical explorations of India, North East India and Bodoland Territorial Council (BTC) area.

The study had been undertaken all the seasons and information was recorded on vernacular names (Bodo, Rabha and Assamese), habitat, flowering and fruiting time. Photographs were taken on habits and habitats of some important and interesting species of Monocot plants.

Collection, pressing, drying and preparation of herbarium specimens has been poisoned with standard solution of Mercuric Chloride (HgCl_2) in absolute alcohol (1gm in 100cc) and mounted on 42×28 cm sized herbarium sheets with help of high quality glue fevicol. The identification of the specimens was confirmed by consulting the herbarium materials of Kanjilal Herbarium (Old Assam), Botanical Survey of India (BSI), Eastern Regional Centre (ERC), Woodlands, Laitumkhrah, Shillong-793003, Meghalaya, India. Collected Monocot plant specimens were deposited as herbarium species in the Herbarium of Botany Dept., University of Science and Technology, Meghalaya (USTM), Meghalaya-793101, India.

Families have been arranged according to Bentham and Hooker's (1862-1883) system of classification with slight modification incorporating splitted families as accepted internationally. Artificial keys for genera and species are like-wise given under their respective families and genera if the number of genera and species exceeds than one. Line drawings of 61 species from each family are provided. For each and every species, the accepted names are included with their original citations. Citation of various important references are given. As possible vernacular names are provided which is followed by a brief description of the species and habitat. There 11 exotic plants, 07 endemic taxa and 19 RET (Rare Endangered and Threatened)-Monocot taxa are also provided.

With special reference to ethnobotany of Bodo and Rabha, 44 Monocot plants with medicinal value, 11 Monocot plants with ritual activities, 07 Monocot plants in ethno veterinary, where 80 Monocot plants with various economic utilities are recorded. The information was collected on the basis of personal interviews with

traditional healers, “Ojha” or “Kobiraj” or “Bej” and old men and women of the Bodo and Rabha society. Bodo and Rabha tribes are the primary group of people who possess a broad knowledge on plants. They completely depend on forests for their day to day lives such as food, shelter and medicine. Their traditional knowledge is proved as invaluable and has contributed in formulating traditional remedies for dreadful diseases such as animal bites, cuts and bleeding, swelling, cough, fever, gastric, dermal, pain and many others.

On the basis of the present exploration and field studies, it is found that some of the extremely rare, endangered species are due to over exploitations and these plants need a strong conservation and protection management. The RET-Monocot plants which have been identified by International Union for Conservation of Nature and Natural Resources (IUCN) are to be conserved by both *in-situ* (on-site) and *ex-situ* (off-site) method.

There is no baseline information available as the present status of vegetation and flora of Udalguri districts are still lacking. Therefore, the present work was undertaken with a view to fill up the existing lacunae on the monocot flora of Udalguri district with special emphasis on ethnobotany particularly Bodo and Rabha tribes. Ethnobotanical uses of Monocot flora plants by Bodo and Rabha tribes have been done for the first time, as earlier works of Monocot flora from this area is still lacking, so this will be the first work from this area.

The present work investigation has amply been justified for the completion of a comprehensive literature on the Monocot flora of Udalguri district is based on extensive taxonomic studies and analysis of plants leading to the ethnobotany and its importance will be of immense benefit not only for the people of the area in particular but also for the entire population of Assam.