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# Biodiversity of forest flora of Dalma forest in East Singhbhum district of Jharkhand

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**Abstract :** Tropical forests are more diverse than the other terrestrial ecosystems by possessing greater number of life forms. It is widely accepted that the identification and prioritization of important centers of biodiversity are necessary at both the national and the global scale for conservation. Indian subcontinent, with diverse bio-climatic regions supports one of the richest flora and fauna. The increased human pressure and consequent effects on the landform and land use changes has a profound effect on the present vegetation and the biodiversity. They not only maintain the components and balance of forest ecosystem but also play vital role in the field of human welfare. The present study compiles an account of biodiversity of forest flora of Dalma forest in East Singhbhum of Jharkhand state.A field survey of the study area was carried out regularly to describe the biodibersity on the basis of floristic study. The study area is a part of lower Gangetic plain which contains unique flora providing inflormation on the present status of biodiversity.

**Keywords : Biodiversity, Dalma, East Singhbhum, Jharkhand.**

## INTRODUCTION

Biodiversity or biological diversity refers to all life forms with their manifold variety that occurs on the earth. It encompasses not only ecosystems population and species but the different subunits of species, each possessing unique characteristic attributes. Protection and conservation of biodiversity is not only a matter of emotion or aesthetics but it is very important for human as well as the entire ecosystem. We have already lost many species that once flourished in this environment. If not properly conserved, the present biodiversity will be drastically reduced in the face of the rapid development that is taking place. We shall have to preserve whatever little greenery is there and we shall have to create more green spaces to improve the biodiversity. The monitoring of biodiversity is an important aspect to realize the sign of changes. But such a monitoring cannot be done without creating a database of flora and fauna of the areas concerned.

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Biodiversity is the variability among living organisms including terrestrial, marine and aquatic ecosystems and the ecological complexes. This includes diversity within species, between species and of ecosystem. It forms the foundation of the vast array of ecosystem services that critically contribute to all human beings. Biodiversity is important in human managed as well as natural ecosystems. It is the foundation of ecosystem services to which mankind is intimately linked. The term 'biological diversity' or 'biodiversity' refers to the variety of life on Earth. It denotes to the wide variety of ecosystems and living organisms as animals, plants, their genes and habitats. The earth and evolution processes are very ancient phenomena. It is crucial for the functioning of ecosystems like oxygen, food, fresh water, fertile soil, medicines, shelter, protection from storms and floods, stable climate and recreation.

The forest Dalma in Jharkhand is one of the important parts of Gangetic plains whose flora is unique to India because of the tropical drier and occasionally humid climate. India is rich in endemic flora and fauna. The endemism of Indian biodiversity is high. The central India

and part of east Indian forest, like Dalma is very significant due to their rich mineral resource and luxurious growth of *Shorea robusta*, the pioneer species and associated species like *Adina cordifolia*, *Terminalia tomentosa* etc, constituting the main timber source to most part of the northern India. The forests as well on these accounts, are derived of the benefit of rain water which otherwise would have increased the moisture status and aided significantly in maintaining a much better forest crop and luxuriant ground flora. The tract is gullied particularly along the banks of the rivers and sheet erosion is common throughout. The increased human pressure and consequent effects on the landform and land use changes has a profound effect on the present vegetation and the biodiversity.

## MATERIALS & METHODS

The present study is mainly based on regular survey of the sampling site and collection and identification of samples. Some of the local residents like Mahendra Majhi, Babulal Soren and Swapan Besra were also present during my survey work, who enumerated the local use of the identified flora. The study area has been taken is Dalma forest in the Dalma hills, Jharkhand state. It is located on 23°01' North to 22°42' North latitude and 86° East to 86°30' East longitudes. It has an average elevation of 3000 fts. Study area falls within the Patamda and Saraikella Forest division and its dominated by a high point at 926 meters on Dalma peak form the northern limits of Chotanagpur plateau. The soil type of study area is covering is loamy and sandy loamy and clay loamy. The annual average rainfall of the districts is 1433 mm.

During the survey , plants were collected , photographed and identified as per the rules and guidelines of Botanical Survey of India.

## RESULTS AND DISCUSSION

It is very clearly understood that biodiversity has great impact in all the aspects of ecological phenomenon and also for sustainable life support. But today declining biodiversity has been a major and ongoing environmental dilemma. Dalma forest region is thick, evergreen and with deciduous trees.

The occurence of various kinds of flora in the Dalma forest of East Singhbhum and the range of biodiversity includes existence of plants like *Acacia auriculiformis*, *Alangium lamarckii*, *Albizzia stipulate*, *Anogeissus latifolia*, *Bassialatifolia*, *Bauhinia vahalii*, *Bridelia retusa*, *Buchanania latifolia*, *Casearia graveolens*, *Casearia tomentosa*, *Cassia siamia*, *Cedrelatoona*, *Cochlospermum gossypium*, *Cleistanthus collinus*, *Cleistanthus patulus*, *Dillenia pentagyna*, *Diospyros melanoxylon*, *Emblica officinalis*, *Eugenia jambolana*, *Ferronia elephanta*, *Ficus hispida*, *Flacourtia cranulatum*, *Flacourtia ramontchii*, *Gardenia gammifera*, *Grewia tiliaefolia*, *Helicter esisora*, *Holarrhena antidysenterica*, *Lagerstroemia parviflora*, *Morinda citrifolia*, *Odina wodier*, *Oroxylon indicu*, *Pterocarpus marsspium*, *Randia dumetorum*, *Semicarpus anacardium*, *Shorea robusta*, *Soymida febrifuga*, *Ptereospermum ptetragonum*, *Terminalia belarica*, *Terminalia chebula*, *Terminalia tomentosa*, *Xyliado labriformis*, *Zizyphus jujube*, *Zizyphus oenoplia* etc.

We can clearly see a great range of biodiversity of forest flora and the trees are being used by the tribals and poor mass of people for so many purposes including food, foddar, timber and herbal medicines. This area is an important centre of Non-timber forest products as Kendu leaves can also be obtained from this locality which play very significant role in providing employment as well as for upliftment of socio-economic status of the local people.

## CONCLUSION

As we know forest flora are our natural heritage and sustaining their biodiversity will be our legacy to future generation. It is very necessary to conserve the forest flora at every levels for healthy and pollution free atmosphere. It is very important to take necessary steps for their conservation. Since, the state of Jharkhand in general and East Singhbhum in particular is very rich reservoir of forests, so there there could be much more possibility of forest flora. There is only need of well defined proper management and awareness among the people for conservation and proper utilization.

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