

Plant Biodiversity of Pachmarhi Hills, Madhya Pradesh



Botany

KEYWORDS :Advertising, Consumer behavior, Branding and Brand identity

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ABSTRACT

The Pachmarhi hill area is virtually a junction of forest representative types prevailing in the state. It is natural junction of two most important timber species viz. teak and sal. The entire forest can be broadly classified in to three major types viz. moist deciduous, dry deciduous, central Indian sub tropical hill forest. However, it can further be classified in to seven types of community patterns based on microclimatic conditions. The Pachmarhi area is rich in plant diversity and gene pool as the combination of different climatic and edaphic factors at various altitudes give rise to rich and luxuriant vegetation which is amongst the richest in Central India. As many as 37 species of epiphytic mosses, 46 species of terrestrial mosses, 57 species of bryophytes, 94 species of pteridophytes, 04 species of gymnosperms and 935 species of angiosperms have been reported in the area. Many of the bryophytes and Pteridophytes are found here exclusively because of the special topographical and climatic features of the locality

INTRIDUCTION

Diversity is the most important characteristic of nature which considered as a beauty of nature this provides the required resources to the whole universe. The role of biodiversity is the maintenance of ecosystem balance. Soil, plants, animals and climate interacting with another and with physical environment in ecosystem form the foundation of sustainable development, biotic resources from this wealth of life support human livelihoods and aspirations make it possible to adopt the changing needs and environment. The gradual loss of diversity of species taking place today will undermine progress towards sustainable society. During the three decades biodiversity conservation and socioeconomic development programmes are designed to minimize losses in biological diversity and efforts are made to conserve plant biodiversity in various parts of the county.

This work was conducted by me and others doing 1997 to 2000 in relations to study of diversity and community pattern of pachmarhi hills. The study overall project sponsored by DBT New Delhi and my Ph.D research work.

Pachmarhi Map



STUDY AREA

Pachmarhi lies on 22°28' N and 78°26' E an isolated plateau on the Mahadev hills of the satpura range which is commonly called as "Queen of Satpura" and summer capital of M.P. it is situated about 54 km south of pipariya railway station. This has an area of 62.16 sq. km. of which practically 5/6 is dominated by forest. The plateau has an average altitude of just over 3500 ft. above MSL. The important mountain peaks are Dhupgarh (4429 ft) on the west, Mahadev (4355 ft) and Chauragarh (4303 ft) on the south.

GEOLOGY, SOIL AND CLIMATE

Different types of geological formations are represented in this area but the main types of Gondwana formation chiefly composed of sandstone and shales.

The soil of this region is different types yellow to black laterite. Soil developed under various types of vegetation. The climate of central India is a typically monsoonic. The rain fall varies from 50 to 250 cm. winter is very severe and some time winter frost is very common and summer is mild.

METHODS OF STUDY OF VEGETATION

Extensive field survey and collection of angiospermic plants were done in pachmarhi forest during rainy, winter and summer season from 1997 to 2000, because the time of flowering in plant is different. 13 sites have been selected for study. The identification of plant is done by the help of Flora of Pachmarhi and Bori reserve (1984) by Mukherjee, The flora of Upper Gangetic Plain by Duthie (1915), Flora of Delhi by Maheshwari (1963) and Flora of Simelensis by Collect (1921) and other flora of different parts of India. Maximum plants species of Angiosperm identity by prof. V.P. Singh, who visited the pachmarhi last 30 years.

RESULTS AND DISCUSSION

Pachmarhi is a beautiful place in the central Indian zone of the angiosperm regions of India. There have been many visits of the workers for the study of angiosperm flora. In present work a revised list has been prepared incorporating the new findings and existing information available time to time. This list includes 935 species belonging to 546 genera distributed to 114 families compared to 778 species belonging to 452 genera distributed over 101 families (Mukherjee, 1984). The third position of Asteraceae and seventh position of Lamiaceae, which are more temperate in nature of the vegetation. The mono cotyledons families namely, Poaceae, Cyperaceae and Orchidaceae account 50 % species under the ten dominant families of the area. It indicates the dominance of monocotyledons plants in the area. The higher the generic coefficient the more varied are the habitats and intergeneric and intragenetic competition in the area. The generic coefficient for the flora of pachmarhi forest ranges is 58.3 %. The high percentage of generic coefficient indicates the at present composition in varied types of micro-climates which may be utilized for the introduction of series growing in similar microclimate elsewhere in the country. It is supported by the fact that theses microclimates are naturally supporting both the tropical and temperate elements.

TOTAL PLANT DIVERSITY OF PACHMARHI HILL

Diversity of pachmarhi has been studied total plant from lower taxa to higher taxa has been accounted from remote areas of pachmarhi to know the total plant diversity exist at present set-up of environmental conditions. We have collected 1173 species from this hill.

Plant groups	Number
Epiphytic mosses	37
Terrestrial mosses	46
Bryophytes	57
Pteridophytes	94
Gymnosperms	04
Angiosperms	935
Total	1173

The climatic conditions of pachmarhi is always in favour of development of sal forest. High rainfall, more humid and acidic nature of soil are the basis for the development of sal forest as has been reported in eastern part of M.P.

CONCLUSIONS

The vegetation of this hill is going declining day by day and many rare and valuable species have been disappeared due to severe interference of human activities. The research work certainly help in the understanding of total phytodiversity of pachmarhi hill in relation to tremendous change in the socio-ergonomic pattern and new environmental set up

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