

## Status and Uses of Certain Trees of Bandhavgarh National Park Umaria Madhya Pradesh



### Social Science

**KEYWORDS :** Status, Uses, Tree flora, Bandhavgarh national park.

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### ABSTRACT

Present study revealed that 40 tree species were used for various purposes which include house construction, furniture, agricultural implements, for making walking sticks, musical instruments etc. The pre dominant families are Fabaceae with 8 species, Myrtaceae with 2 species, Combretaceae with 3 species, Mimosaceae with 4 species, Euphorbiaceae with 4 species, Verbenaceae with 3 species, Moraceae with 3 species and Meliaceae with 1 species pre dominant plants are Sal (*Shorea robusta*), Saja (*Terminalia tomentosa*), Tendu (*Diospyros melanoxylon*), Amla (*Emblica officinalis*), Bamboo (Dhawda (*Anogeissus latifolia*), Jamun (*Syzygium Cumini*), Salai (*Boswellia serrata*), Bamboo (*Dendrocalamus Strictus*) and Plash (*Butea monosperma*) are exclusively used only for furniture, musical instruments, agricultural implements and plants are predominantly used for house construction.

### INTRODUCTION

Bandhavgarh is one of the popular national parks in India located in the Umaria district of Madhya Pradesh. Bandhavgarh was declared a national park in 1968. With an area of 105sq/km .while half of the forest is being covered with tree of Sal (*Shorea robusta*) and Bamboo (*Dendrocalamus Strictus*). Nature has endowed Madhya Pradesh (M.P.) with varied fauna and flora, which are to be preserved for the advantage of present and future generations. The state government has been alive to the situation to conserve our natural heritage of flora and fauna and has created a network of protected areas covering all the regions of the state. Bandhavgarh National Park resides on the extreme north eastern border of Madhya Pradesh and the northern edges of the Satpura mountain range. Bandhavgarh is very rich in floral diversity. Due to the tropical monsoon climatic zone, the park has been characterized by well defined winters summers and rains and the sprouted weather definitely makes the whole environment more lush and unabridged. The altitude of the reserve varies between 410 meters (1,345 ft) to 810 meters (2,657 ft) and being flourished with 32 hills with a large natural fort in the centre of the park. The fort has magnificent view sides with its cliffs of 2625 feet (800 meters) high, 1000 feet (300 meters) above the neighbouring countryside. Prospering with high and thick Sal forests the entire jungle brings a blissful aroma to the surroundings. The upper slope of the reserve is filled with the mixed forest of Sal, Dhobin and Saja along with Sal. Tree species along with shelter, food, and cloths are the utmost priorities of mankind (Belukha, 2002) .The tree resources are used by the ethnic communities and the villagers for various purposes i.e. house construction, furniture, agricultural implements, for making walking sticks, musical instruments, etc .Timber is the most important forest resource

Used by any community in Madhya Pradesh as well as in any part of the country. This paper deals with the tree species of Bandhavgarh National park, Umaria (M.P.) and their various uses by the ethnic communities and villagers. Previously a little work has been carried out in various part of the state to find out different resources and their uses but the information is scattered and meagre and has various gaps. National park are the richest areas for studying ecosystem as these are least disturbed by humans. Therefore the main objective of the study was the conservation of biodiversity with involvement of community and indigenous knowledge, so as to preserve it for the future generations. Our approach for the biodiversity conservation involves in -situ and ex-situ strategies.

### MATERIALS AND METHODS

#### PHYSIOGRAPHIC FEATURES OF THE STUDY AREA

Umaria districts of north –eastern Madhya Pradesh state, and is a part of the central Indian. Highlands falling between the Vindhya and the Satpura hill range. The area under the National Park is rugged and is marked by sharp crested hills, Sal forests and grassy pastures. The altitude varies between 440m to 811m above and the impressive Bandhavgarh hills are the highest place in the reserve. The hills are mainly composed of sandstone and the soil is sandy. Vegetation is varied, and includes a blend of grassland and forests that support large herbivore populations and an impressive diversity of birds. Field survey was conducted in Bandhavgarh national park from January 2014 to Oct 2015. The studies were carried out on various communities and villagers dependence upon trees for various purposes in day to day life. Keeping the objective in mind, intensive use explorations were under taken in Bandhavgarh national park Umaria. The Bandhavgarh national park has an area of 446sq/km and Longitude: 80° 47'15" to 81°11'45" E Latitude: 23° 30' 12 to 23° 45' 45 N Altitude: 440mts to 810mts above sea level. Annual rainfall is 1175mm. Umaria district population is 644,758 (cences 2011).

**Table: - List of tree species which have been reported in Bandhavgarh National Park -**

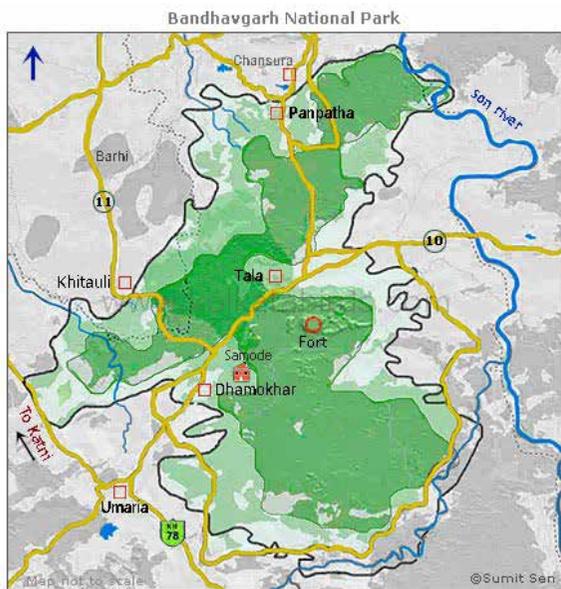
SN	SPECIES NAME	FAMILY	LOCAL NAME	USES
01	<i>Shorea robusta</i>	Dipterocarpaceae	Sal	F,H
02	<i>Terminalia tomentosa</i>	Combretaceae	Saja	H,R
03	<i>Anogeissus latifolia</i>	Combretaceae	Dhaora	H,A
04	<i>Diospyros melanoxylon</i>	Ebenaceae	Tendu	F ,A
05	<i>(Buchanania lanzan</i>	Anacardiaceae	Char	H
06	<i>Emblica officinalis</i>	Phyllanthaceae	Amla	F
07	<i>Butea monosperma</i>	Fabaceae	Palas	M ,P
08	<i>Chloroxylon sweitenia</i>	Rutaceae	Bhirra	H
09	<i>Tectona grandis</i>	Verbenaceae	Sagon	F,H
10	<i>Pterocarpus marsupium</i>	Fabaceae	Bija	F,H
11	<i>Albizia lebeck</i>	Leguminaceae	Siris	F,H
12	<i>Boswellia serrata</i>	Burseraceae	Salai	F
13	<i>Gmelina arborea</i>	Lamiaceae	khamer	A
14	<i>Mangifera indica</i>	Anacardiaceae	Aam	F,H
15	<i>Haldina cordifolia</i>	Rubiaceae	Kadum	H
16	<i>Acacia catechu Wild</i>	Fabaceae	Khair	A
17	<i>Tamarindus indica</i>	Caesalpiniaceae	Emli	A,H
18	<i>Syzygium Cumini</i>	Myrtaceae	Jamun	A,H
19	<i>Dendrocalamus Strictus</i>	Poaceae	Bash	F,H,M
20	<i>Grewia tilifolia</i>	Malvaceae	Dhaman	H

21	<i>Terminalia chebula</i>	Combretaceae	Harra	H
22	<i>Belleric myrobla</i>	Combretaceae	Bahera	H
23	<i>Dalbergia sissoo</i>	Fabaceae	Sisum	F
24	<i>Adina cordifolia</i>	Rubiaceae	Haldu	F
25	<i>Bombax ceiba</i>	Malvaceae	Semal	F
26	<i>Ficus glomerata Roxb.</i>	Moraceae	Gular	A
27	<i>Sterculia urenus Roxb.</i>	Sterculiaceae	kulu	A,H
28	<i>Azadirachta indica</i>	meliaceae	Neem	H
29	<i>Zizyphus xylopyrus</i>	Rhamnaceae	Ghont	F
30	<i>Careya arborea</i>	Lecythidaceae	kumhi	A
31	<i>Woodfordia fruticosa</i>	Lythraceae	dhawai	A
32	<i>Terminalia arjuna</i>	Combretaceae	Arjun	H
33	<i>Cordia dichotoma</i>	Boraginaceae	lasoda	H
34	<i>Zizyphus mauritiana</i>	Rhamnaceae	Ber	F
35	<i>Anogeissus latifolia</i>	Combretaceae	Dhaora	H,A
36	<i>Ficus virens</i>	Moraceae	Pakhri	A
37	<i>Acacia nilotica</i>	Fabaceae	Babul	A
38	<i>Bridelia squamosa</i>	Euphorbiaceae	Kasahi	A
39	<i>Madhuca indica</i>	Sapotaceae	Mahua	F,H

**Abbreviations:** - A -Agricultural implement, F-furniture, fuel, H- House construction, P- Packing cases.

Villages and these villagers are dependent on the forests of the national park for timber, fuel wood, fodder, and other minor forest produce to a large extent .The society is largely Gond, Baiga, and Kol. The Wheat, Maize, Rice and vegetable are the main crops, to find out various timber yielding plants either in flowering or fruiting stage and to know the uses of timber wood, different categories of people like family heads, healers, and old experienced and knowledgeable informants were repeatedly interviewed. Specific questions based upon profarma designed by Jain and Goel (1995) were asked and the resultant information was recorded. Vegetation of BNP( Bandhavgarh national park) falls under five categories, moist peninsular low level Sal (*Shorea robusta*) forest , northern dry mixed deciduous forest, dry deciduous shrub , dry grassland and mixed deciduous forest Bio-geographic classification, the area is part of the Deccan Peninsula, Central highlands ( Rodgers, Panwar & Mathur,2000)

families are Fabaceae with 5 plant species, Combretaceae with 6 species, Moraceae with 3 species , Meliaceae with 2 species, Rubiaceae with 2 species and Poaceae, Myrtaceae, Euphorbiaceae, Verbenaceae, Sapotaceae, etc. One species each among various trees, 14 species for agricultural implement, 20 species are used for house construction, 12 for furniture manufacturing, 4 for musical instruments and 01 species is used for packing cases. This study is clearly useful to industries relying on timber resources of these rich ranges of Madhya Pradesh. Compared to available data of other protected area of India, Suresh et al. (1996) enlisted. Tree species of timber resources, medicinal and aromatic plants are remarkable for their efficient values for human beings. The areas of these parks with lower diversity indices need to be given protective measures for conserving biodiversity, and areas peripheral to territorial divisions, which are more affected by biotic pressure from the adjoining villages, Bandhavgarh can be identified as Moist Peninsular Sal Forest and Southern tropical Moist Mixed Deciduous Forest and Southern Tropical Dry Mixed Deciduous Forest. The reserved area has over 600 species of flowering plants, 50 species of aquatic plants and 18 species of rare plants. Bandhavgarh National Parks has variety of tree that one may come across during visit. Some to bio geographic classification, the area lies in Zone 6A- Deccan Peninsular, Central Highlands (Rodgers, Panwar & Mathur, 2000). The classification of Champion & Seth lists the area under Northern India Moist Deciduous Forests. The vegetation is chiefly of Sal forest in the valleys and on the lower slopes, gradually changing to mixed deciduous forest on the hills and in the hotter drier areas of the park in the south and west The wide valleys along the streams carry long linear grasslands flanked by Sal forests. Rich mixed forests consisting of Sal (*shorea robusta*), Saja (*Terminalia tomentosa*) Salai, (*Boswellia serrata*) etc. With dense Bamboo (*Dendrocalamus Strictus*) thickets occur in many places. These together provide Bandhavgarh its rich biodiversity. The present study will be helpful in making plan for the sustainable management of the vegetation of these habitats in this area.



STUDY SITE - BANDHAVGARH NATIONAL PARK

**RESULTS AND DISCUSSION**

Trees are largest life form of the plants. There is a rich diversity of the plants over the world out of them trees registered for their maximum diversity in variable environmental condition. A total of 40 plant species recorded from the Bandhavgarh national park (Table) they belong to 23 families. The predominant

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