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Attractive Wild Plants of Mukundra Hills Range of Rajasthan: A Case Study of Three Medium Sized Trees

Dr. O. P. SHARMA

Associate Professor, Department of Botany, Government College Bundi, Rajasthan, India

ABSTRACT: Mukundra hills ranges are rich in scenic beauty and biodiversity, located near Kota and Jhalawar district of Rajasthan. This is a thickly wooded area and now declared as tiger reserve. Dense forests and large number of trees and shrubs are salient features of this region. Three wild attractive medium sized trees of Mukundra hills ranges are considered in this communication as a case study.

KEYWORDS: Mukundra hills, Deciduous, *Dichrostachys cinerea*, *Ehretia laevis*, *Vitex negundo*

I. INTRODUCTION

Mukundra hills ranges are located in Haroti region of south-east Rajasthan. Haroti plateau is situated at the edge of the Malwa plateau at 23°45' to 25°53' N latitude and 75°9' to 77°26' E longitude in the south-eastern corner of Rajasthan. Mukundra hills is popularly known as Darrah range and Darrah wildlife sanctuary. In past Darrah was the royal hunting ground of the Maharaja of Kota.

The name Darrah means pass in the local language. It is situated between two parallel mountains viz. Mukundra and Gagrola. In 1955 Darrah was declared a wildlife sanctuary. In 2004 it was declared as Mukundra hills national park. Tiger reserve was established in the year of 2013. The reserve is set on the boundaries of four cities of Rajasthan namely Kota, Bundi, Chittorgarh and Jhalawar.

Hilly region, higher elevation, characteristic topography and forest cover makes important reasons for richness of Angiosperm flora of the area. The climate of the area favours the growth of dry deciduous forests. Many attractive flowered wild trees, shrubs and medium sized trees have been found in Mukundra hills ranges. Three wild medium sized trees or large shrubs of attractive flowered have been taken in this consideration.

II. RELATED WORKS

The notable contribution from ecological studies particularly on floristics includes Mathur, 1960; Champion and Seth, 1968; Shringi, 1981; Shetty and Singh, 1987 – 1993; Sharma 2002; Singh and Singh 2002; Sujana and Sivaperuman, 2008; Kumar, 2012; Meena, 2012; Sikarwar, 2014; Jadhav, 2016 and Sharma, 2020 and 2022. Attractive species of large shrubs (Three plants) of study area have been recorded in present enumeration.

III. METHODOLOGY

Ecological factors influence vegetation by producing variations, in the climate, physiography and soil conditions of geographical region. Mukundra hill range of area is generally wooded and contains root stocks of *Anogeissus pendula*. Present study is based on field observations and collection tours during July 2020 to July 2022.

An attempt has been made to taxonomical exploration of area to emphasise attractive wild angiosperm trees. Extensive surveys were conducted of area in different seasons to assess the density, morphological characters, flowering and fruiting time, etc. of abundant large shrubs or medium sized trees of the area.

IV. EXPERIMENTAL RESULTS

Mukundra hills is an extension of Vindhyan ranges in Rajasthan. It is mountainous and has a variety of herbs, shrubs, large shrubs, climbers, lianas and trees. It has grassland in between and also many dry deciduous trees. Some common tree species in the forests of Mukundra hills includes *Anogeissus pendula*, *Acacia nilotica*, *Acacia catechu*, *Aegle marmelos*, *Azadirachta indica*, *Bombax ceiba*, *Cassia fistula*, *C.siamea*, *Dalbergia sissoo*, *Dichrostachys cinerea*, *Ficus religiosa*, *F. glomerata*, *F. benghalensis*, *Vitex negundo*, *Butea monosperma* and *Mitragynaparvifolia*.

Various phenological characters of each species are regulated by environmental parameters. Common three wild angiosperms of medium sized trees are described in present work. These are enumerated as botanical name, family, common name, morphological characters, locality, flowering and fruiting and special interesting features.

1. *Dichrostachys cinerea* (L.) Wt. & Arn.

Family: Mimosaceae

Common name: Goya khair, Kunali

A woody thorny, shrubs, branches light brown, leaves stipulate, stipules-free lateral, pinnately compound, bipinnate and petiolate, leaf base pulvinate and oblong. Inflorescence axillary pendent spike, polygamous flower; the flowers in the proximal half of the inflorescence are sterile, long and pink, while the flowers in the terminal half of inflorescence are bisexual, yellow and short; fragrant. In the sterile flowers all the stamens are reduced to staminodes, monocarpellary, unilocular. Fruit sub articulated, twisted pod.

Most common shrubs along the foothills, and in open forests.

Fls. and Frs: August to November.

Dichrostachys cinerea (L.) Wt. & Arn. is an attractive coloured common wild thorny shrub. Its flowers are polygamous, in dicoloured spikes; proximal half are yellow and fertile but another terminal half part is pink and sterile. It becomes an interesting situation.

2. *Ehretia laevis* Roxb.

Family: Ehretiaceae

Common name: Tamboli, Chamaror

A large deciduous shrub, sometimes small trees, straggling habits, fast growing, spreading irregular branches, bark light gray to whitish, smooth, mainly downy growth, leaves variable, ovate-elliptic, obtuse to acute, petiole long. Flowers white, in corymbose cymes, arrange paniculate, attractive, corolla 5 lobed, stamens exerted. Fruit a small drupes yellow-orange, red-black when ripe, smooth and globose. Common in dry deciduous forests, found sometimes in scandent mode of growth in foot hills.

Fls. and Frs: February to June.

It blooms from spring to summer with white, fragrant flowers in dense clusters, and form white mat under the tree.

This plant is now again placed in family Boraginaceae.

3. *Vitex negundo* L.

Family: Verbenaceae

Common name: Nirgundi, Negarh



A large perennial shrub, branched, evergreen, cylindrical, hairy, leaves pinnately compound, digitately 3-5 foliate, leaflets petiolate, oblanceolate and grey-pubescent. Flowers in long panicles, cincinnal tendency, sepals shortly 5 toothed, persistent, corolla personate, bi-lipped, blue or violet. Fruit small globose drupe, 4 celled, seeds ovate-oblong.

Common along the river beds and wet wastelands.

Fls. and Frs: Almost throughout the year.

Seed oil is used for swelling as ointment. Leaves are used in headache and rheumatism. The branches are used for manufacturing of baskets.

V. CONCLUSION

The forest vegetation of the Mukundra hills ranges is Tropical dry deciduous. This baseline information is significant to open new perspective for the conservation of vegetation of area. This study creates the awareness about the biodiversity and ecosystem maintenance. Analysis of colour representation of flowers of plants revealed that *Dichrostachys cinerea* (L.) Wt. & Arn. have dicoloured spikes (proximal half are yellow and another terminal half part are pink); *Ehretia laevis* Roxb. have white and fragrant and *Vitex negundo* L. have blue or violet flowers.

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