Chapter-4

ACCOUNT OF VEGETATION IN CENTRAL INDIA
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General vegetation: In India the forest occupies roughly 1/10 of total land area. Approximately 1,46,000 sq. km (31.5%) land area of Central India comes forest cover. The 26.3% of total forest cover area of the country falls under the political boundaries of Madhya Pradesh and Chhattishgarh. The developed vegetation is the sine of rich biodiversity, which relay information about the climatic condition, geological, soil type, humidity, topographic information, including various physical features of the particular area.

The southern, central eastern and some parts of eastern regions have more dense, moist and green vegetation due to heavy rainfall in comparison to western, northwestern and central western regions of the Central India.

The forests of Central India principally grouped into two types by Champion & Seth (1968) viz. Tropical and Montane Sub tropical. Except some specific regions like forest area of Maikal hills, Satpura hills, Vindhya hills and Bailadilla hills, the entire Central India falls under Tropical forests. Tropical forests have been further divided into northern semi-ever green, moist deciduous, dry deciduous and thorn forest. The moist deciduous forests have again been subdivided in various types as north Indian forms and south Indian forms. However, they also admit that these forms to integrate in Central India and are scarcely distinguishable below.
(A) MONTANE SUBTROPICAL FORESTS

In Central India these vegetation represents only few specific regions of upto 1000-1200 m. The forest area of Pachmarhi, Tamia Patalkot, Bailalilla hills and few patches of Amarkantak fall under Montane subtropical vegetation. These forests resemble the dry deciduous forests through with a higher proportion of the evergreens. The annual rainfall is 200-250 cm. The topography, climatic and altitudinal conditions, heavy rain fall coupled with high humidity are the factors responsible for luxuriant growth of pteridophytes (ferns and fern-allies) in these regions, which relay the massage of rich plant resource of the area.


(B) TROPICAL FORESTS

1. **Northern tropical semi-evergreen forests:** The eastern region of the Central India occupies these types of vegetation. The area receives about 1400-1700 mm annual rainfalls. These forests comprise woody climbers, orchids and various fern species *viz.* *Angiopteris evecta* (Forst.) Hoffm., *Dryopteris choleeata* (D.Don) C. Chr., *Christella parasitica* (L.) Le’v., *Drynaria quercifolia* (L.) J. Sm.,
Adiantum incisum Forsk., A. philippense L., Pteris vittata L., Cheilanthes farinosa (Forsk.) Kaulf etc.

Terminalia alata, Stereospermum suaveolens, Shorea robusta, Artocarpus lakoocha, Michelia champaca, Celtis tridentata, Ficus spp., Phoebe lanceolata and moist bamboo brakes of Bambusa arundinacea are common throughout the forest area. The canopy is reaching a height of 24-36 m.

2. Tropical moist deciduous forests: These types of forest vegetation are common in Amarkantak, Hoshangabad, Balaghat, Sarguja, Raigarh and Mandla districts of Madhya Pradesh and Bastar, Jagdalpur and Keshkal of Chhattishgarh states. They comprise climbers and epiphytic vegetation. Top canopy is reaching about 25 m. The annual rainfall is high about 1500 mm. The forests dominated by *viz:* Shorea robusta, Tectona grandis, Tyerminalia alata, T. bellirica Trewia nudiflora, Ficus spp. with a thick undergrowth of ferns like *Lygodium flexuosum* (L.), *Cheilanthes tenuifolia* (Burm.) Sw., *Athyrium falcatum* Bedd., *A. filx-femina* (L.) Roth., *Diplazium esculentum* (Retz.) Sw., *Selaginella repanda* (Desv. ex Poir.) Spring etc.

These forests are redivided on the basis of predominance of a particular species or according to ecological degradation in to (a) Moist teak bearing forests (2) Moist mixed deciduous forests (3) Moist peninsular Sal forests (4) Terminala alata forests (5) Secondary moist missed deciduous forests and (5) Sal savannah forests. These types are scattering throughout the moist deciduous forest zone.

3. Tropical dry deciduous forests: These types are composed of several dry deciduous species. The top canopy is invariably open and light usually between 8-20 m high. Woody climbers, epiphytic species, orchids and ferns vegetation are entirely absent except a few one.
These forest are much common in undulating areas of with low rising hills of northern, western and central western districts of Madhya Pradesh and Chhattishgarh viz. Sidhi, Panna, Hoshngabad, Betul, Chhindwara, Amarkantak, Chhatarpur, Sagar and Vidisha. The region receives annual rainfall of 850-3100 mm.

The common constituents of these forest are tall trees viz. *Terminelia arjuna, Tectonia grandis, Pterocarpus marsupium, Cochlospermum religiosum, Butea monosperma, Hardwickia binata, Serculia urens* etc. The several climbing species are *viz. Rhynchosia minima, Atylosia scarabaeoides, Ipomoea spp., Ziziphus oenoplia, Tinospora cordifolia, Coccinia indica* etc.

4. **Tropical thorn forests:** These forests chiefly consist of hard leaved evergreen forest and xerophytic vegetation. The canopy is ± broken and under 10 m high. Only few patches are reported from the plains and the low hills area of northern of Monera and southern west part of West Nimar of Madhya Pradesh. The annual rainfall is 700-1000mm.

The main constituents are *viz. Acacia spp., Ziziphus spp., Aegele marmelos, Cordia oblique, balanites roxburghii, Gymnosporia spinosa* and *Flacourtia India*. The climbers and epiphytic vegetations are scarce. The pteridophytic vegetation is not much in the forest.

**AQUATIC PLANTS**

Numerous free-floating hydrophytes, submerged hydrophytes, anchored submerged hydrophytes and amphibious hydrophytes *viz. Eichhornia crassipes, Lemna perpusilla, Wolffia globosa, Aponogeton cripus, Ipomoea aquatica, Nymphaea pubescens, N. rubra, Tenagocharis latifolia* are growing together with some common species of water ferns
and fern allies *viz.* *Marsilea minuta* L., *Ceratopteris thalictrodes* (L.) Brongn., *Azolla pinnata* R. Br., *Isoetes coromandelina* L. etc.