

CHAPTER NO. VI

VEGETATION CHARACTERISTICS OF THE TARAPHINI  
RIVER BASIN

Out of the total number of 432 villages which comprise the entire region of the Taraphini river basin, about 217 villages have forest.

About 33 percent of the entire basin area is under forest cover which is composed of 95 percent of original flora and 5 percent of artificial forest or plantation forest (Census report, Govt. of West Bengal, 1971). The forest type here can be grouped, following Indian standard classification (Champion, 1939) as "Dry deciduous Dry Sal" which has mainly originated due to interference of man and animal resulting in deforestation and subsequent long continued exposure to atmosphere creating deficiency in soil moisture leading to the retardation in the rate of vegetation growth. The condition is worse in the north eastern portion of the Taraphini river basin in Bankura District (Raipur Police Station) where the biotic interference like burning, grazing, repeated coppicing etc., has almost wiped out the Sal forest and has favoured the growth of Xerophytic type.

The principal type of original vegetation in the area is Sal which occupies about 55 percent of the total forest composition. The usual associates of Sal which include Terminalia tomentosa (Asan),

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Terminalia belerica (Bahora), Pterocarpus marsupium (Peasal),  
Diospyros melanoxylon (Kend), Butea frondosa (Palash), etc. cover  
about 30 percent of the total forest area, under original species.  
Thorny scrub forest, marking the formation of retrograde vegetation  
through biotic influences is represented by the inferior plants  
like Holarhena antidysenterica (Kurchi), Combretum decandrum(Atang)  
etc. These species occur sporadically occupying about 15 percent  
of the total forest area.(Forest Department, Govt. of West Bengal).

Forest here is an age old feature in the landscape. Previously  
it was known as 'Jungle Mahal' which was simply residence of fierce  
animals, a few tribes and numerous species of quality forest. But  
after the rule of British, following the opening of new railway line  
of Bengal-Nagpur railway (i.e. S.E. railway), the importance of forest  
was felt and from these so-called unculturable waste land, local zamin-  
dars and tribals began to cut the trees unscientifically whose consequ-  
ence is the present day depletion of forest areas. After independence  
in the year 1948, West Bengal Private Forest Act was promulgated to  
protect forests of the area. But by then the quality had almost degraded  
and at present, forests here are mainly concentrated in the western half  
of the river basin on the elevated areas and in patchy occurrences in  
the villages of the southern and south eastern portion(Map No. 12).

This forest cover, although small in area, yet encompasses two forest divisions: i ) Western Midnapur and ii ) Bankura. Moreover (for further management and working plans), this region is occupied by three forest head quarters, two in Bankura *viz.* Ranibundh and Raipur and one in Western Midnapur *viz.* Dinpur Block II. The Head Quarters are again subdivided into four ranges composed of 13 beats. A beat in the area is composed of (on an average) 20 villages and a range, of 120 villages. (Map No. 2 ).

The forest now lacks compactness and is highly tortuous in its boundaries due to occasional intervention of cultivated land or the formation of scrub forest. But in the remote and inaccessible areas (in the elevation belt of 252-300 metres, in the western and north western portion), the fine stand of sal tree with the abundance of miscellaneous original flora is seen. A continuous elongated belt of 9 km forest is seen covering parts of Bans-Pshari Range, parts of Belpahari Range in Western Midnapur and almost the whole of Ranibundh Range in Bankura forest divisions. (Photo No. 10).

Beat-wise distribution of forest in particular ranges presents a dismal picture (Graph No. 4 ). The Fullusma beat of Hotgoda range in the north eastern portion shows 60 percent of the total forest as composed of derelict forest of Sal while Bagdubi Beat of Hotgoda range

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shows an extensive forest cover especially in the areas bordering the Ranibundh range, stems which are still viable to develop into fine stand, are <sup>also</sup> observed. Near Dhanjor village within Bagdubi beat, there are some places where after coppice felling the regeneration of sal has failed to come-up as original and miscellaneous <sup>ones</sup> are likely to dominate in near future.

Sal predominates in almost all the ranges of Western Midnapur. Their distribution varies from 33 percent to 70 percent of the total forest area of the ranges in the western Midnapur forest division. In southern portion within Belpahari range, about 70 percent of the total forest area is composed of Sal (Table No. 25). The reason can be ascribed to the preponderance of iron-rich soil which supports natural growth of Sal. Miscellaneous species are likely to dominate in Banspahari range (Table No. 25) especially in the south western part where the soil is comparatively base-rich with occasional rocky exposures, retarding the natural growth of sal.

Plantation forests or artificial forests, which are distributed either replacing non-economic original species by economic one or converting the waste land into green fields, started only in the year 1960. But at present introduction of Eucalyptus, Acacia Auriculiformis, Cassia Simoa, Tectona Grandis and different miscellaneous

plantation species are being planted especially in southern and southwestern areas in continuous zones and in the western hilly land of the area in patches, all belonging to West Midnapur forest division. The forest in the northern part within Bankura forest division is lacking the varieties of artificial forest. Only Eucalyptus covers 3 hectares of land out of the total forested land of 70.69 hectares. Although plantation work of miscellaneous species has started in 1977 particularly on quartz boulder-strown hillocks, bordering Raipur-Banibundh road, yet owing to increase in the cultivated land and also the increased demand of firewood the deforestation process is acute which hampers the plantation work.

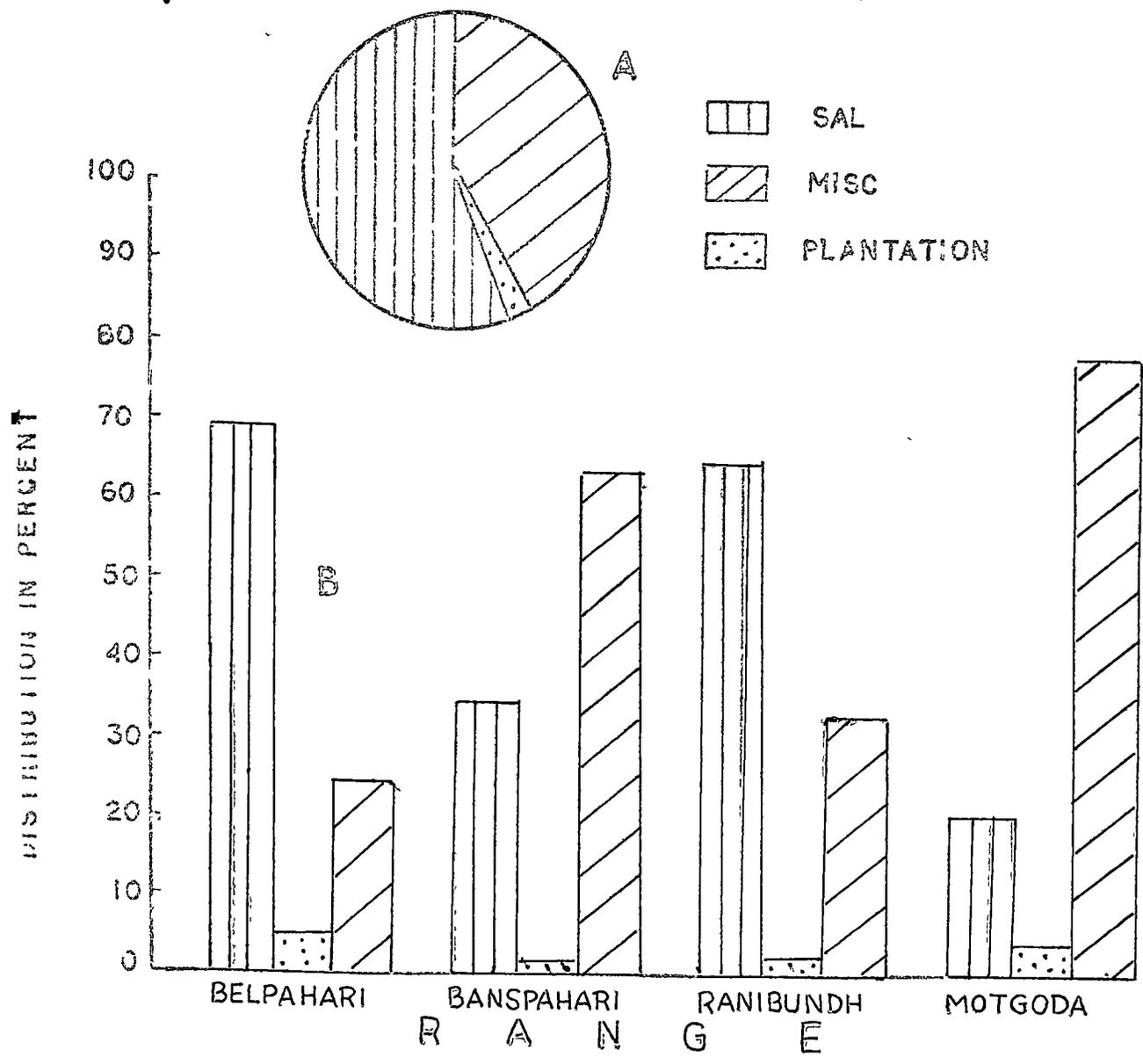
TABLE NO. 25

Distribution of Sal, Miscellaneous and Plantation Forests with Percent of Red Soil, in Ranges of the Taraphini River Basin.

<u>Ranges</u>	<u>Percent of red soil</u>	<u>Percent of sal.</u>	<u>Percent of miscellaneous.</u>	<u>Percent of plantation</u>
Belpahari	57.0	69.80	24.09	6.11
Banspahari	56.5	34.34	62.00	3.66
Ranibundh	50.29	64.00	32.00	4.00
Motgoda	37.00	19.30	74.00	6.70

Source: Forest Department, Govt. of West Bengal ( 1966 and 1976 )

MEAN DISTRIBUTION OF FOREST COMPOSITION IN PERCENT (A)  
 AND  
 RANGEWISE DISTRIBUTION OF FOREST COMPOSITION (B)  
 IN TARAPHINI RIVER BASIN



Eucalyptus and Acacia Auriculiformis have kept almost equal pace regarding their distribution in the area. (Table No. 26). These species are fast grown and are economically suitable for pulpwood production, especially when the dearth of bamboo is acute. Eucalyptus is comparatively rare in Bankura forest division, owing to the lack of required moisture in the soil and existence of richer original flora.

TABLE NO. 26

Distribution of the Planted Species in the Plantation Areas of the Tarapini River Basin.

<u>Name of Species.</u>	<u>Eucalyptus</u>	<u>Acacia Auri- culiformis.</u>	<u>Tectona grandis</u>	<u>Cassia sinea</u>	<u>Sai</u>	<u>Misc- ellaneous</u>
<u>Percent</u>						
<u>to total</u>	41	37	8	7	1	6
<u>plantation</u>						
<u>area.</u>						

Source: Forest Department, Govt. of West Bengal(1976)

Teak (Tectona Grandis) is another important species but it is not so popular and quick adjusting like Eucalyptus or Akasmoni(Acacia Auri-  
culiformis). Moreover, since 1976 no new teak nursery has been opened in the area and the present area under Teak covers only 8 percent of the total area of planted species.

Teak requires base-rich calcium soils which are uncommon in this lateritic, base-deficient acidic soils. Only 15 villages which are composed of either, alluvium, colluvium or lava-derived soils, are scheduled for Teak plantation.

Cassia Simea thrives well on sandy alluvium soil with higher content of calcium and organic matter. It is mainly needed for pulpwood. It covers seven percent of the total plantation area. Talpukhuria and Banspahari Beat together contain about 65 percent of the total distribution. These beats are favourable for the plantation of Cassia Simea, because of the high and dense natural forest cover which supplies abundant organic matter to the soil.

Sal does not come up successfully in the area. Intensity of drought causes desiccation of soil and consequent depletion of Sal forest. (Forest Deptt. Govt. of W.B.). It occupies the least area covering only one percent of the total plantation forest.

Miscellaneous species which includes plantation of Alstonia Scholaris, Kyllia Xerocarpa, Pterocarpus marsupium, Terminalia belerica etc. are planted covering only six percent of the total distribution of the planted species. Mainly afforestation and soil conservation are the aim, although these species are useful for minor produce and firewood as well. About 70 percent of these species are concentrated in Belpahari and Simulpal beat of Midnapur and in Motgoda range in Bankura forest division.

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