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Phytodiversity and stratification pattern of eastern Sohelwa forest in district Balrampur of Uttar Pradesh, India

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SUMMARY

Rich phytodiversity is an indicator of the health related to a particular habitat and its potential of sustain life. Forests are the only source of timber, wood fuel, bamboos and a rich source of a variety of valuable products. In sohelwa forest, District Balrampur (U.P.), the area bears mainly dry sal forests. The other species found are – Sheesham, Jamun, Rohini, Asana, Haldu, Semal, Mahua, Khair, Bel etc. Teak plantation in large areas have been taken up during recent past. Apart from the above mentioned species many shrubs, creepers and grasses are also found in this area. These variations leads different stratification pattern in sohelwa forest.

Key words : Phytodiversity, Stratification.

Forests have been a native place for an array of plant and animal commuties since the very inception of life (Sharma, 1994). Man has been associated with forests since the nomadic stage of his ancestors and transition from nomadic hunting and food gathering era to agricultural pursuits started from forests. Forests have been used to serve as shelter place to millions of people because they provide means of livelihood to them through their multiferious uses (Cain, 1950). They used to be considered as a place of mental peace and have served secured a very high position in our spritual life.

According to "Bhatia and Sharma (1988)" stratification is the way in which plants of different species are arranged in different vertical layers in order to make full use of the available physical and phytological requirements. Data on stratification are obtained by using a bisect. Vertical projection in constructed and stature of the species may be plotted to find out distribution pattern of stem, roots etc. of different species (Sharma, 2003).

Stratification is the phenomenon of having more than one layer stratum formed by the different heights of plant growing in the same place. 5-7 strata are known in certain forests. They are large trees (L_6), medium trees (L_5), short trees (L_4), shrubs (L_3), herbs (L_2) and ground flora (L_1) etc. The trees that constitute the uppermost stratum or layer are called dominant trees. Among the latter there ate two categories – Predominants (tallest) and codominants (slightly shorter than the predominants).

The study area is Sohelwa forest at Balrampur District adjacent to Indo-Nepal border at 27^0 61'-$27^0$32' N and 82^0 3'-82^0 22' E. The climate of the study area is subtropical monsoon type. The present work deals with stratification pattern and condition of phytodiversity of Eastern Sohelwa forest.

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MATERIALS AND METHODS

Topography:

Eastern Sohelwa forest is a part of Sohelwa forest which is situated at District Balrampur. It is a subtropical dry deciduous forest, adjacent to Indo-Nepal border at $27^0$61'-27^0 32' N and $82^0$3'-$82^0$22' E.

Soil:

The soil of Eastren Sohelwa forest is of pleistocene gangetic alluvial type and differs considerably in texture ranging from sandy to loam and silt to clay loam.

Climate:

The climate of Eastren Sohelwa forest is typically subtropical type with rainy winter, summer and two transition periods. Monsoonic rain occurs from June to September but some times also occurs up to December. Floods usually occur in September.

Dense vegetation canopy of trees growing on the both sides of all the road and fields impart a forest like landscape. The survey made by the authors revaled that due to migration of certain species there is no definite sequence in the distribution of trees. Though the silviculturits endeavour appears to maintain their density and frequency within the sustainable capacity according to edaphic and climate requirements,

Exhaustive survey of Eastern Sohlawa forest was

Table 1 : Details of Sites

Site	Study area
I	Near Range Office, residential colonies and villages
II	Tapovan
III	Inner core of dense forest