The study on the growth cycle of the dry evergreen forest.

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ABSTRACT

The results revealed that total individuals (for trees larger than 4.5 cm in DBH) showed random distribution. Seven important species showed contagious distribution while the rest showed random distribution.

The age class distribution was discontinuous and four age groups(<100, 100-200, 200-300 and >300 years) occurred in the study plot (50 m X 50 m.) The canopy layer was a mosaic of patches (81.46-413.3 m^2 patch area), which had different mean ages. The recruitment of canopy trees was carried out by advance regeneration in the plot. The regeneration process derived from the analysis of the plot consisted of three phases leading to the development of even-aged patch.

A simple model for diffused light condition in canopy gaps is presented. The vertical changes of illuminance in gaps calculated from the model agreed with the changes observed in the study forest. The illuminance in a given sized gap could be estimated from the model. Size distribution of gaps in the study forest suggested that most gaps were too small for the frequent occurrence of pioneer species.

The number of gaps in 1 ha plot were 18 gaps. Gap are was 8,860 m^2 (18.60% of total land area). The average size of gap was 115 m^2 and the maximum size was 420 m^2. Gaps were made by 1-3 gap making trees. The concentration of gap formation in particular years was not observed. In average 0.48 canopy trees per hectare were died, and gap of 41.33-82.66 m^2 per hectare were annually. The turnover time of canopy tree which was calculated from four different methods was 100-230 years.