B-99 : FOREST GAP VEGETATION IN HORTON PLAINS

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The Upper Montane Forest bordering the Horton Plains grassland is affected by anthropogenic fire and forest dieback. In the present study the vegetation in forest gaps formed due to these two factors is examined.

Four different types of gaps were identified based on their past history and studied using 10 mx 10 m plots. They were forest gaps, (a) 2 years after fire (4 plots), (b) 4 months after fire (3 plots), (c) twice burnt and 4 months after the second fire (3 plots), and (d) those formed by dieback (5 plots).

In the 1500 M^2 sampled there were 98 vascular plant species belonging to 41 families. Only 14% of the species were endemic. The proportion of herbs, shrubs and trees were 68%, 15% and 12% respectively. Plant diversity was highest in 2 year old fire gaps (33 families and 59 species) followed by 4 month old fire gaps (28 families and 46 species) and dieback sites (22 families and 38 species). In twice burnt gaps the diversity was lowest (13 families and 19 species) while *Cynoglossum furcatum* Wall. (Boraginaceae) and *Carex longicruris* Nees (Cyperaceae) were found in all sites. *Pteridium aquilinum*(L.) Kuhn (Dennstaedtiaceae) was present only in all fire gaps. Ten species were most frequent and included the exotic *Eupatorium riparium* Regel (Compositae) and *Aristea ecklonii* Baker (Iridaceae). Natural forest seedlings were absent in gaps formed by fire.

The results suggest that fire and forest dieback could seriously affect the composition and regeneration of Upper Montane Forest in Horton Plains region.

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