B-40: Forest regeneration at Randenigala-Rantambe Reservoir area after fire

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Three sites with varied burning histories (1, 3, and over 6 years after burning) were compared to study the differences in vegetation and to identify the pioneer species and fire tolerant species in fire affected areas surrounding Randenigala and Rantembe reservoirs.

Five 20 m x 20 m plots were sampled in each site, height of all individuals and girth of those over 10 cm girth at breast height were measured. For comparison, a natural forest patch in close proximity to these fire affected areas was also sampled.

The number of families, genera, species as well as taxa restricted to each site increased with time after burning, while Rubiaceae dominated sites burnt 1 and 3 years ago, Leguminosae and Euphorbiaceae co-dominated the vegetation in the remaining site based on species abundance. Based on density of individuals however, Tilliaceae, Rutaceae and Euphorbiaceae dominated these 3 sites respectively. *Grewia daminae, Chloroxylon swietenia* and *Phyllanthus polyphyllus* dominated these sites respectively. *Adina cordifolia, Anogeissus latifolia, Bauhinia racemosa, Bridelia retusa, Grewia daminae, Vitex altissima, Mitragyna parvifolia* and *Schleichera oleosa* appeared to be fire tolerant. With time, after burning, density of individuals increased but % of fire tolerant species showed a decrease.

These results provide a preliminary understanding of the effect of anthropogenic fires on natural forest regeneration, which has long term implications on wild life management.

Financial assistance by the Natural Forest Ecology and Management Programme of the University of Peradeniya/Oxford Forestry Institute Link Project is acknowledged.