

Does restoration promote recruitment of woody species in pine plantations in Lower Hantana, Sri Lanka?

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Thinning and enrichment planting to convert poorly managed monoculture exotic plantations to mixed species plantations plays a crucial role in the maintenance of biodiversity and ecosystem services. Therefore, this study was conducted to investigate the woody seedling recruitment in a restored *Pinus caribaea* Morelet stand (RP) and an unrestored pine stand (UP) in lower Hantana, Sri Lanka. The density, richness and diversity of seedlings of woody species were determined in RP and UP stands.

Fifteen plots (5*5 m²) were established randomly per site and three subplots (1*1 m²) were laid inside each plot. Seedlings (<50 cm of height) of woody species that emerged in subplots (1*1 m²) were tagged and identified. A total of 840 seedlings of woody species belonging to 14 plant families and 32 species were recorded from both sites (570 seedlings belonging to 14 families and 24 species from the RP; 240 seedlings belonging to 12 families and 16 species from the UP). The mean density of seedlings was higher in the RP (3.6 seedlings m⁻²) than the UP (3.0 seedlings m⁻²) and species richness was higher in the RP (24) than the UP (16) stands. Moreover, species diversity was higher in the RP than the UP. Seedlings of pioneer species dominated both sites, with nearly equal percentages. A higher percentage of native species was recorded in both sites (RP=.66%, UP =55%) than endemic and exotic species. *Artocarpus nobilis* Thw. the only endemic species recorded during the study emerged from the RP.

Our study concludes that the plant diversity in the RP is greater than the UP, probably resulting from the alteration of microclimatic conditions due to restoration effort.