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Applying quantitative analysis for road side population of Lower Risk (category of IUCN red list version 2.3 and version 3.1) tree species

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ABSTRACT

This paper provides more important quantification analysis such as abundance, relative density, frequency, relative frequency, important value and average species density of Lower Risk tree species with taxonomic information of LR tree species and IUCN red list categories version 2.3 and version 3.1. 20 quadrates, each 10×10 m^2 size, were placed randomly at each of the both sites on Highway for floristic study of LR tree species and quantitative analysis such as Abundance A (%), Relative Density RD (%), Frequency F (%), Relative Frequency RF (%), Important Value IV (%) and Density D (plants/m^2). The samples (Part of tree species) collected from the both sites were dried and poisoned with saturated mercuric chloride ($Hgcl_2$) solutions with ethyl alcohol (C_2H_6O) (115 g mercuric chloride dissolved in 4.5 liter ethyl alcohol, called Kew Mixture) and After the specimens were poisoned, they were dried and affixed (along with a label) on mounting sheets [28 cm X 42 cm (±1 cm) dimension] by using fevicol glue. A total identified 6 LR tree species *Pongamia pinnata* (L.) Pierre (1 ± 1.07), *Acacia auriculiformis* Benth (0.4 ± 0.59), *Alstonia scholaris* (L.) R.Br. (1.6 ± 1.31), *Delonix regia* (Hook.) Raf. (1 ± 0.97), *Shorea robusta* Gaertner f. (0.2 ± 0.52) and *Thuja occidentalis* L. (0.05 ± 0.22). The research work was totally based on identification of LR tree species, IUCN category red list status, taxonomic information and quantitative analysis of LR tree species along the highway.

Key words: IUCN, identification, road, quantitative analysis, tree species