Abstrak

Plant growth distribution patterns are influenced by habitat characteristics, ability of adaptation, and association with other plant species or animals. The influence of those factors, especially habitat characteristic, needs to be defined to support plant conservation management. This study was aimed to: 1) measure plant growth dependence on their microhabitat; 2) define microhabitat variables that significantly influence the growth; and 3) develop suitable conservation measures at species level. Ramin (*Gonystylus bancanus*) is one of major timber species that has been facing high exploitation in Indonesia. This species is usually found on specific “peat swamps” ecosystem. Data were collected through primary surveys in Riau Province and analyzed by clustering the adult based on total height and basal area variables, and describing the distribution pattern of the cluster. Then, Discriminant Function Analysis (DFA) was used to overlay the cluster with the distribution of microhabitat characteristic consisting altitude, slope, soil humidity, soil pH, peat depth, and canopy cover (measured in percentage). The results showed that distribution of microhabitat matched with 67.4 persen of height distribution and 78.3 persen of width distribution of tree basal area. Altitude and canopy cover percentage had significant correlation with total height distribution (α=0.05).Meanwhile, altitude, canopy cover, and slope had significant correlation with basal area (α=0.1). However, peat depth variable showed an interesting pattern since shallower peat depth was followed by wider of basal area. High correlation between plant growth and its microhabitat suggested that to conserve *G. bancanus*, in-situ conservation offered better strategy than ex-situ conservation.