
FOREST STRUCTURE CHARACTERISTICS AND DIVERSITY OF WOODY SPECIES OF EVERGREEN BROADLEAF FOREST IN BA BE NATIONAL PARK

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SUMMARY

The research was conducted to evaluate the structural characteristics and tree species diversity of evergreen broadleaf forest in Ba Be National Park, Bac Kan, Vietnam. A total of 10 representative temporary plots was established to measure growth parameters and identify species names of all trees with a diameter at breast height - $D_{1.3} \geq 6$ cm. The results showed that average density across plots ranged from 360 - 580 trees/ha; average $D_{1.3}$, tree height (Hvn), total basal area (G) and total volume (V) ranged from 14.1 - 26.3 cm, 10.7 - 16.6 m, 9.5 - 27.3 m²/ha and 72.5 - 251.4 m³/ha, respectively. N/ $D_{1.3}$ distribution patterns were not similar across the plots with 4 out of 10 plots following an inverted J shape pattern, 2 out of 10 plots following Meyer distribution. N/Hvn distribution was all skewed to the left of the graph with 8 out of 10 plots follow the Weibull distribution. There was a close relationship between height and diameter with a correlation coefficient R^2 ranged from 0.76 - 0.82 of which the quadratic function in the form of the logarithm was identified as the best function to describe this relationship. Spatial distribution patterns of woody plants were mainly in the form of regular distribution (for plots of the forest states III_{A2} and III_{A3}) and random (for plots of the forest state III_{A1}). Regarding the diversity profile of woody species, the most intrinsic diversity was found in forest state III_{A2}, while no difference was found between the forest state III_{A1} and III_{A3}. The outcomes of this study not only will enhance evaluating the value of the natural forest ecosystem, but also will be useful for developing management strategies for the sustainability of the forest resources.

Keywords: Diversity of overstory trees, diversity profile, evergreen broadleaf forest, forest structure characteristics, spatial distribution.

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