

Research Article

Variation in vascular epiphytic assemblage along altitudinal zone in Temperate forest ecosystem

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ABSTRACT

The focus of ongoing research in forest ecosystems is highly biased towards vascular epiphytes that grow non-parasitically on host trees and contribute substantially in shaping biodiversity. In this communication, an effort has been made to understand the vascular epiphytic assemblage and richness along the altitudinal gradients in temperate forests of Darjeeling Himalaya. Additionally, influence of environmental variables was also analyzed. Orchidaceae was the dominant family followed by Polypodiaceae and Ericaceae in terms of species abundance. The epiphytic richness and diversity were greater towards lower altitudinal tier compared to the higher. The epiphytic diversity was positively correlated with host tree CBH (circumference at breast height) and bark texture, while bark pH showed a negative correlation. The outcome of this study establishes a baseline of epiphytic characteristics with respect to elevational range and environmental variables in temperate Himalaya. However, a detailed study on population dynamics, habitat evaluation and geographic aspects with further development on monitoring and conservation effort is of utmost necessity.

Key words: Diversity, orchidaceae, host tree, CBH, environmental variables, conservation

