

FLORISTIC SHIFT IN RESPONSE TO *AGERATINA ADENOPHORA* (SPRENG.) R.M. KING & H. ROB. (ASTERACEAE) INVASION IN A MIXED FOREST OF CHAMPAWAT, KUMAUN HIMALAYA

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Himalayan forests are dynamic ecological systems that regulate climate, soil, and water cycling, and sustain rich biodiversity. Yet, invasive plant species like *Ageratina adenophora* are progressively threatening their integrity. This study explores the ecological impacts of *A. adenophora* invasion on vegetation structure and composition of mixed forest in the Champawat region of Kumaun Himalaya. Comparative analysis between uninvaded and invaded sites revealed substantial alteration in community structure. While the invaded site exhibited higher tree density and basal area, this was primarily due to the dominance of few disturbance adapted species, leading to reduced species evenness and altered spatial distribution patterns. Significant decline was observed in frequency, abundance, and regeneration of the key native and non-native species such as *Myrica esculenta*, *Quercus leucotrichophora*, and *Cedrus deodara*, while opportunistic species like *Alnus nepalensis* and *Betula alnoidea* showed increment in these parameters. Shrub and herbaceous layers were similarly affected resulting in decline of local plant diversity and dominance of *A. adenophora*. Diversity indices demonstrated drop in diversity, and community imbalance in invaded areas. These findings emphasize the serious ecological consequences of *A. adenophora* invasion and underline the need for anticipatory management and restoration approaches to secure native biodiversity and uphold forest ecosystem functioning in the Himalayas.

Keywords: Biological invasion, biodiversity loss, change assessment, ecological impacts, forest regeneration, invasive species, species composition.

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