

ASSOCIATION FOR TROPICAL BIOLOGY AND CONSERVATION Asia Pacific Conference

"Bridging the elements of biodiversity conservation save, study, use "

10-13 September 2019
MAS Athena, Thulhiriya, Sri Lanka

PROCEEDINGS

















Bambusa bambos (L.) Voss alters regeneration potential in tropical moist evergreen forests in Sri Lanka

M.P.T. Wijewickrama^{1*}, W.A.I.P. Karunaratne², D.S.A. Wijesundara³ and H.M.S.P. Madawala⁴

¹Postgraduate Institute of Science, Peradeniya, Sri Lanka ²Department of Zoology, University of Peradeniya, Peradeniya, Sri Lanka ³National Institute of Fundamental Studies, Hantana Road, Kandy, Sri Lanka ⁴Department of Botany, University of Peradeniya, Peradeniya, Sri Lanka

Studies show that the rapid spread of native bamboos tends to alter forest structure and functions. Bambusa bambos (L.) Voss is a native of South and South-east Asia including Sri Lanka, with no apparent commercial value. It creates patchy distributions in dry and intermediate zone forests in the island raising concerns of their detrimental impacts on forests. The study evaluates the impacts of B. bambos on regeneration potential of Tropical Moist Evergreen Forests (TMEF) in Sri Lanka. The seedling recruitment and their survival were enumerated in forest patches rich in B. bambos (B+) in three study sites viz., Galboda (GAL), Moragolla (MOR) and Maragamuwa (MAR), located in the Central Province of Sri Lanka. Forest patches with no bamboo (B-) were also selected from respective locations for comparison. Seedlings/saplings less than 50 cm in height were enumerated monthly for a period of 12 months using 18 (per site) 1m² quadrats. The results were compared using repeated measured ANOVA. Seedling recruitment was closely linked with the rainfall, with higher emergence during wet months. The floristic diversity was higher in B+ than in B-, possibly due to open canopy in B+. Jaccard index indicated a marked dissimilarity between B+ and B- forests in all study sites. The seedling abundance and their survival showed no consistent differences between B+ and B-, possibly due to high site-specific differences among study sites. However, the seedlings of Dimocarpus longan (the most dominant canopy species in TMEFs) showed a significantly higher chance of survival n B- than in B+. Overall results suggest that the patchy distribution of B. bambos has the potential to alter the composition of these forest communities over time probably through modified micro-habitat conditions in the forest floor.

Email: tharanga985@gmail.com