

A preliminary study on impacts of *Bambusa bambos* spread in intermediate zone forests in Moragahakanda, Sri Lanka

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Bambusa bambos is native to Sri Lanka though it is a known invasive species elsewhere in the tropics. Some parts of the intermediate zone forests in Moragahakanda area (located in the Matale district) have been heavily invaded by *B. bambos*. The present study was carried out to identify some ecological impacts of this invasive spread in these forest ecosystems by comparing an invaded (INV) and an un-invaded (UNI) forest patch, located about 2 km apart from each other. The vegetation less than 1 m in height (hereafter will be known as ground vegetation) was enumerated using ten, randomly placed 1 m² quadrats. Seedling richness, density, diversity and evenness values were calculated. Surface litter was quantified. Soil samples were analyzed for some basic soil parameters including pH, conductivity, moisture content, microbial biomass carbon, total nitrogen and phosphorus. The results were analyzed using Minitab 16.0 version. The ground vegetation in INV forests showed higher density and species richness compared to UNI forests. The Shannon-Wiener Diversity index (H') also showed a higher value in INV (2.77) than in UNI forests (2.03). The Pielou's Evenness index also recorded a higher value at INV (0.82) compared to UNI (0.60). The abundance of tree saplings and seedlings was also higher in INV than in UNI forests. Species composition showed notable differences between INV and UNI forest patches, with only two species in common. Though the surface litter was dominated by *Bambusa* litter (\approx 86%) in INV forests, the total litter content did not differ significantly between the two forest patches. Soil analysis revealed significantly higher N, P and moisture contents in INV sites than in UNI. Microbial biomass C too showed higher values in invaded forests, though not significantly. The preliminary results suggest that *Bambusa* spread has changed the composition of the ground vegetation with a possibility of altering the standing vegetation over time. *Bambusa* spread seems to enhance the soil fertility status perhaps through higher litter turnover and its quality. The preliminary results suggest that the *Bambusa* spread has the potential to alter these intermediate zone forests unless measures are taken to control its spread.