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Identification, distribution and ecological features of alien invasive species in the Hantana range

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Hantana range is one of the biologicaly richest and hydrologically important areas and it has been classified into five major ecosystems namely grassland, isolated forest patches, riverine vegetation, *Pinus* plantation and are abandoned tea lands. At present, all these ecosystems being invaded by a number of invasive species resulting in massive and rapid losses of biodiversity. However, there are no records on the distribution and ecological features of alien invasive species in Hantana range. The present study was therefore carried out to initiate a long-term study while emphasizing on identification, distribution pattern, the effect on biological diversity of existing vegetations and the utilization of the species over a period of six months. Three permanent plots (10*10 m) were randomly selected from each ecosystem and the number of invasive and non-invasive species was assessed.

Of the 38 alien invasive species recorded in Sri Lanka, 13 species are found in Hantana. *Clusea rosea, Clidemia hirta, Wedelia trilobata* are the most dominant species in riverine vegetation, isolated forest patches and abandoned

tea lands, respectively while *Panicum maximum* dominant in both *Pinus* vegetation and grasslands. *C. hirta* has invaded all five ecosystems and *C. rosea* is found in other ecosystems except for abandoned tea lands, becoming a threat to the existing vegetations. The number of alien invasive species is higher than the non-invasive species in both Grassland (2375:628) and *Pinus* (47:35) vegetations. The ratios of the non invasive to invasive species of riverine vegetation, forest patches and abandoned tea lands are (315:70), (313:108) and (128:102), respectively. The field survey showed that even though the invasive species are a threat to the biological diversity, some species are used by the communities who are living in the vicinity as timber and firewood, green manure and animal feed. Few species are used as ornamental plants and some are used to conserve the soil. 35% of farm families use *P. maximum* as an animal feed. These findings can be utilized for designing control strategies of alien invasive species for the conservation of existing biological diversity of the Hantana range.