



INVASION OF *Parthenium hysterophorus*. L. WEED OVER OTHER COMMON WEEDS IN THE VAVUNIYA DISTRICT, SRI LANKA

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Parthenium is a highly invasive weed in Sri Lanka which was initially reported in Vavuniya district and intensely affected the environment. Therefore, this study was carried out to assess the invasion of *Parthenium* weed of the other weeds in the urban and suburban areas of Vavuniya district. A field survey was carried out to quantify the distribution of *Parthenium* and other species composition at 21 locations where *Parthenium* infestation was reported. At each sampling location 05 experimental quadrats with *Parthenium* infestation and five control quadrats without *Parthenium* infestation over different land use types (e.g: agricultural lands, village tanks, associated lands, road sides and barren lands) were used to study the variation in the association of native floral species in *Parthenium* dominated locations. Invasive Alien Species (IAS) provincial profile map of Vavuniya District, Northern Province was used as the secondary data for this study. The Shannon diversity index (H) was used to characterize the species diversity of weeds. *Parthenium* in the study area was noticed to have higher Absolute Density (AD), i.e., 2 plants per square meter whilst *Tephrosia purpurea* (0.3), *Cleome viscosa* (0.25), *Ocimum canum* (0.35) were identified with moderate AD. The rest of the species, such as *Tridax procumbens*, *Leucas zeylanica*, *Mimosa pudica*, *Calotropis gigantea*, *Amaranthus spinosus*, *Emillia javanica*, *Stachytarpheta jamaicensis*, *Lantana camera*, *Dichrostach cinerea*, and *Vernonia cinerea* showed values less than 0.25. The Relative Density (RD) of the *Parthenium* weed was recorded as the highest (~26%) whilst the rest were less than 11%. Accordingly, *Parthenium* was the most dominant IAS in the study area and it appears to suppress the growth of the other species. The quadrats lacking *Parthenium* observed with the well distribution of the other species. The species richness and species evenness of *Parthenium* was found to be in the range of 0.36–0.72 and 0.60–0.98 respectively. Infestation of the *Parthenium* was higher in the Vavuniya town area where the rainwater usually collects.

Keywords: Invasion, *Parthenium*, Vavuniya district, Weed Density

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