A study about the geographical isolation of the *Rhododendron arboreum* plant in Horton plains national park

Wijekoon P.M.[1]; Jayaratne M .[2]

Abstract

Geographical factors have mainly influenced the origin and expansion of plants in the world. The *Rhododendron arboreum* plant, which is endemic to Sri Lanka is fairly spread in high altitudes area from 1500m to 2400m in central highland. The main objective of this research is, to identify whether the *Rhododendron arboreum* plant geographically isolated and spread as an invasive form. The study area of this research is Horton plains national park in Nuwara-Eliya. The research was based on primary and secondary data. The mixed-method has applied for this research and questionnaire, interview, direct observation on square method were conducted to collect the primary data. The books, research articles, and magazines were used as secondary data. To find the answers qualitative and quantitative analyzed were done using the MS excel, GIS, and Shannon's diversity index calculation. According to the analysis *Rhododendron arboreum* plant has been geographically isolated and the growth of this plant has been dynamic in the last two decades. 80% of the sample shows that *the Rhododendron arboreum* plant is grown and expanded in the areas that were used for potato cultivation in the earlier period. Although the *Rhododendron arboreum* is an endemic species, the Horton plains ecosystem can be affected due to it's as an invasive nature. For this reason, it is important to conduct a systematic study on this plant to ensure the sustainability of the Horton plains national park.

Keywords: endemic plants, geographical isolation, Rhododendron Arboreum, Horton plains national park

[1]Department of Geography, Faculty of Social Sciences, University of Kelaniya, Sri Lanka. (prasadimadushani95@gmail.com)
[2]Lecturer, Department of Geography, Faculty of Social Sciences, University of Kelaniya, Sri Lanka (mangala7@kln.ac.lk)