Classification the Habitats of Verbascum songaricum schrenk Through Cluster Analysis in Iran Central Zagros

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Abstract

The classification of plant communities is one of the methods which specifies the structure of an ecosystem. Further, it represents its relation with environmental factors. Cluster analysis method is highly efficient in descriptive ecology to determine the plant communities. The main purpose of this research is to classify the rangeland sites of Verbascum songaricum and determine qualitative indices which have been to separate these sites by cluster analysis. This study was done in five rangeland sites of Verbascum songaricum, Howz Vally, Gahiz, Semeiroom entrance and Ghadam palace as well as Dena. In order to identify secondary chemical components, in flowering stage, the plant was collected from five mentioned rangeland sites, and dried in shade and digestion method was used for juice extraction. According to qualitative indices of Verbascum songaricum, classification of cluster analysis of rangeland sites was done through Minimum Variance Method. The results of classification were depicted in tree diagram. One Way ANOVA; Duncan test was used based upon a completely randomized design to identify the role of qualitative indices in tree diagram. The diagram findings were indicated that the places used in the study centered upon the secondary chemical components in extraction of the flower, leaf and stem, 3 rangeland sites were separated in the same level 68.5 percent, 71.5 percent and 63 percent. In flower organ, Ester components and glycoside, in leaf organ, acid, glycoside, amid and terpen, and finally in stem organ, hydrocarbon and nitril component led to analyze the habitants in the study. Overall, the results of current study show that the cluster analysis method has a high accuracy. Moreover, this method could be investigated plant indices in appropriate manner and determine indices which can cause of split these sites. It is suggested that the same studies should be done in habitants of Verbascum songaricum in other cities in order to better specify the habitants of the plant. It is also recommended that through providing the need environmental conditions of the plant, it should be cultivated in wild level to have a maximum use of effective substance of the plant which it can also prevent the decadence of Verbascum songaricum.

Keyword: Cluster Analysis, Central Zagros, Qualitative Indices, Verbascum Songaricum.

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