

## The survey of macrophytes diversity in wetland zone of Boujagh National Park, Guilan, Iran

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### ABSTRACT

The aim of this study was to identify the ecological species groups and investigate the diversity among them. The research area comprises in a wetland system of Boujagh National Park, in Northern of Guilan Province, Iran. Vegetation sampling was carried out by 44 sample plots were placed within the different zones in a stratified random manner. In each sampled plot, the cover percentage value of each species was estimated using Bran-Blanquet scales. Vegetation classified using Two-Way Indicator Species Analysis (TWINSPAN). Classification of plots showed four vegetation groups: "*Ceratophyllum demersum-Nelumbo nucifera*, *Juncus acutus-Rubus sanctus*, *Mentha aquatica-Phragmites australis*, *Hydrocotyle vulgaris-Phragmites australis*". Plant diversity in these vegetation groups have been evaluated. The comparison of diversity indices among groups were performed with ANOVA test. Results of analysis of variance in species diversity indices showed significant differences among the groups in terms of some biodiversity indices. The survey of variation in the groups showed that group 3 had the highest and group 1 had the lowest in Fisher's diversity indices and Menhinink's and Margalef's richness indices respectively. In Sheldon's evenness index group 1 had the highest and group 2 had the lowest measure. Finally, the overall survey of indices showed that despite the high richness and diversity in groups of 3 and 2, evenness of these group less than group 1 with lowest richness and diversity.

**Key words:** Boujagh National Park, macrophytes, Caspian Sea, Iran