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## Habitat suitability of *Artemia parthenogenetica* in Meighan wetland (Markazi province) using multivariate analysis

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### Abstract

In this research, the habitat preferences of *Artemia parthenogenetica* were monthly studied in 10 different sampling sites in the Meighan wetland from October 1394 to September 1395. In ten stations, the abundance of this species and 15 physical and chemical variables as well as the abundance of a microscopic algae, *Dunaliella salina*, were simultaneously measured in two different depths: in the surface layer and the depth of 50 cm (120 samples for each depth). Based on the results of principal component analysis (PCA), sodium, conductivity and sulphate had more impact than other variables regarding the habitat preferences of *Artemia parthenogenetica* in Meighan wetland. Also based on the outcomes of linear discriminant analysis (LDA), the occurrence of the given species in cold seasons (autumn and winter) is less than warm seasons (spring and summer). The results of Mann-Whitney U test showed that there is a significance difference between the most variables (except sodium, water temperature and sulfate) taken in two different depths. According to ANOVA (post-hoc test), there are also significant differences between the occurrence of *Artemia parthenogenetica* and different seasons as well as between the occurrence of species and some sampling sites.

**Key words:** *Artemia parthenogenetica*; Meighan wetland; habitat preferences; multivariate analysis