

## Seasonal Diversity and Frequency of Planktonic Bacillariophyta (Diatoms) in Coastal Waters of the Southern Caspian Sea

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### Abstract

This study aimed to investigate the biodiversity and abundance of diatoms in coastal waters of Sari and Babolsar on 2015, in two linear transects and 8 stations from estuary to 20 m depth. Sampling the water and measuring some environmental parameters such as temperature, salinity, acidity and dissolved oxygen, followed by evaluation of diatoms (Bacillariophyta) qualitatively and quantitatively. Margalef, Pielo and Shannon-wiener indices were used to assess richness, evenness and diversity of diatoms, respectively. There was no correlation between environmental parameters and diversity and abundance of diatoms, but only salinity; also, the mean of diatom diversity indices in both season was higher in Babolrood estuary (1.20 and 0.79). Also, the mean diversity indiccs of diatoms was higher in winter (0.62) than in summer (0.41). In this study, 17 genera of diatoms were identified and counted; and according the results, *Cyclotella* sp. was the most abundant diatom in both seasons, and *Surirella* sp. was found only in estuaries. Ecological indices' assay showed that, this area is suffering of a kind of ecological disturbance, which indicated that the risk of ecological disturbance in the study area, is more serious than previous research.

**Keywords:** Diversity, Abundance, Diatoms, Bacillariophyta, ecological indices, Caspian Sea.