Abstract

The meiofauna from seagrass meadows in the western sector of the Gulf of Batabanó, Cuba were studied to describe the spatial and temporal variations in community structure. Replicated cores were taken in three locations (arranged in m- and km-scales) and in two seasons (dry and wet). The meiofauna (metazoans between 500 and 45 µm) were identified to major taxa. Temporal changes in the meiofaunal communities could not be detected and they are not linked to the subtle seasonal changes in the water column. A larger variation in community structure was observed in the spatial m-scale (among cores in a station) probably accredited to heterogeneity of microenvironment and biological processes. A second source of variation in the km-scale (among locations) was identified relating to physical processes affecting seagrass meadows: marine currents and anthropogenic disturbances. Distribution patterns of meiofauna across locations coincide with one study from 20 years ago in seagrass beds (i.e. higher densities in area closer to break-shelf and diminution of fauna at southern of Pinar del Río); however, cumulative anthropogenic disturbances on seagrass meadows would most likely explain the depletion of communities observed in our survey in comparison with decades ago. Estimates of meiofaunal density and richness of major taxa from our study (and other areas from the Cuban shelf) are consistently lower than other temperate and tropical sites; possibly caused by low primary productivity due to narrow tidal amplitude and oligotrophic waters. Rev. Biol. Trop. 56 (1): 55-63. Epub 2008 March 31.

Keywords

Meiofauna, seagrass meadows, Caribbean Sea, spatial distribution.