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Abstract

Seasonal variation of ecological components (epiphytes and aquatic animals) in the seagrass beds (*Zostera marina* L.) in brackish Lake Obuchi, located in the center of the Shimokita Peninsula in Aomori Prefecture, were observed from June 2004 to April 2005. The biomass of *Z. marina* varied from maximum in June to the minimum in April. The most numerous species among the epiphytes on the leaf of *Z. marina* were *Cocconeis placentula* and *Licmophora flabellata* belonged to the Bacillariophyceae. The dominant taxa of the aquatic animals in the seagrass beds were the Arthropoda (*Ampithoe valida*, *Gnorimosphaeroma rayi*, and *Melita* sp.), Mollusca (*Musculista senhousia*) and Annelida (*Polydora* sp.). From the relationships among water temperature, salinity and the density of epiphytes, Arthropoda and Annelida in the seagrass beds, it was clarified that the densities of them strongly depend on water temperature. The division ratios of organic carbon among the ecological components in the seagrass beds, *Z. marina*, epiphytes, Arthropoda, Mollusca and Annelida, were 100 : 7 : 10 : 5 : 0.02 in summer, and 100 : 11 : 0.1 : 0.4 : 0.0003 in winter, respectively.