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The seasonal occurrence and abundance of gelatinous zooplankton in the southwestern part of the Marmara Sea

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[Abstract] The invasion of alien species has become a great problem for many seas of the world due to increasing international commerce combined with the use of ballast water on ship. In the early 1980s, the ctenophore, *Mnemiopsis leidyi*, first invaded the Black Sea and later it spread to the Marmara Sea and *B. ovata*, predator of *M. leidyi*, appeared in this sea in the late 1990s. In this study, we focused on spatial and seasonal distributions of six gelatinous zooplankton (the indigenous *Aurelia aurita*, *Rhizostoma pulmo*, *Pleurobrachia pileus* and the invaders *Chrysaora hysoscella*, *Mnemiopsis leidyi* and *Beroe ovata*) by using data obtained from 4 cruises to the southern Marmara Sea carried out In July 2006, October 2006, March 2007 and June 2007. While Mnemiopsis leidyi was always found except March 2007, *Beroe ovata* was present only in October 2006 sampling area. The appearance of *Beroe ovata* resulted in a sharp decrease of *M. leidyi* abundance. The maximum abundance of *Pleurobrachia pileus* was in June 2007 (9.5 ind.m^{-3}). *A. aurita* was absent in March 2007. *Chrysaora hysoscella* and *Rhizostoma pulmo* was observed only in July 2006 and June 2007. As a conclusion, gelatinous zooplankton species in the Marmara Sea should be investigated in order to predict potentially their effects on valuable fisheries resources.