

GELATINOUS MACROZOOPLANKTON COMPOSITION AND SEASONAL DISTRIBUTION IN SINOP PENINSULA OF THE CENTRAL BLACK SEA OF TURKEY BETWEEN 2002 AND 2006

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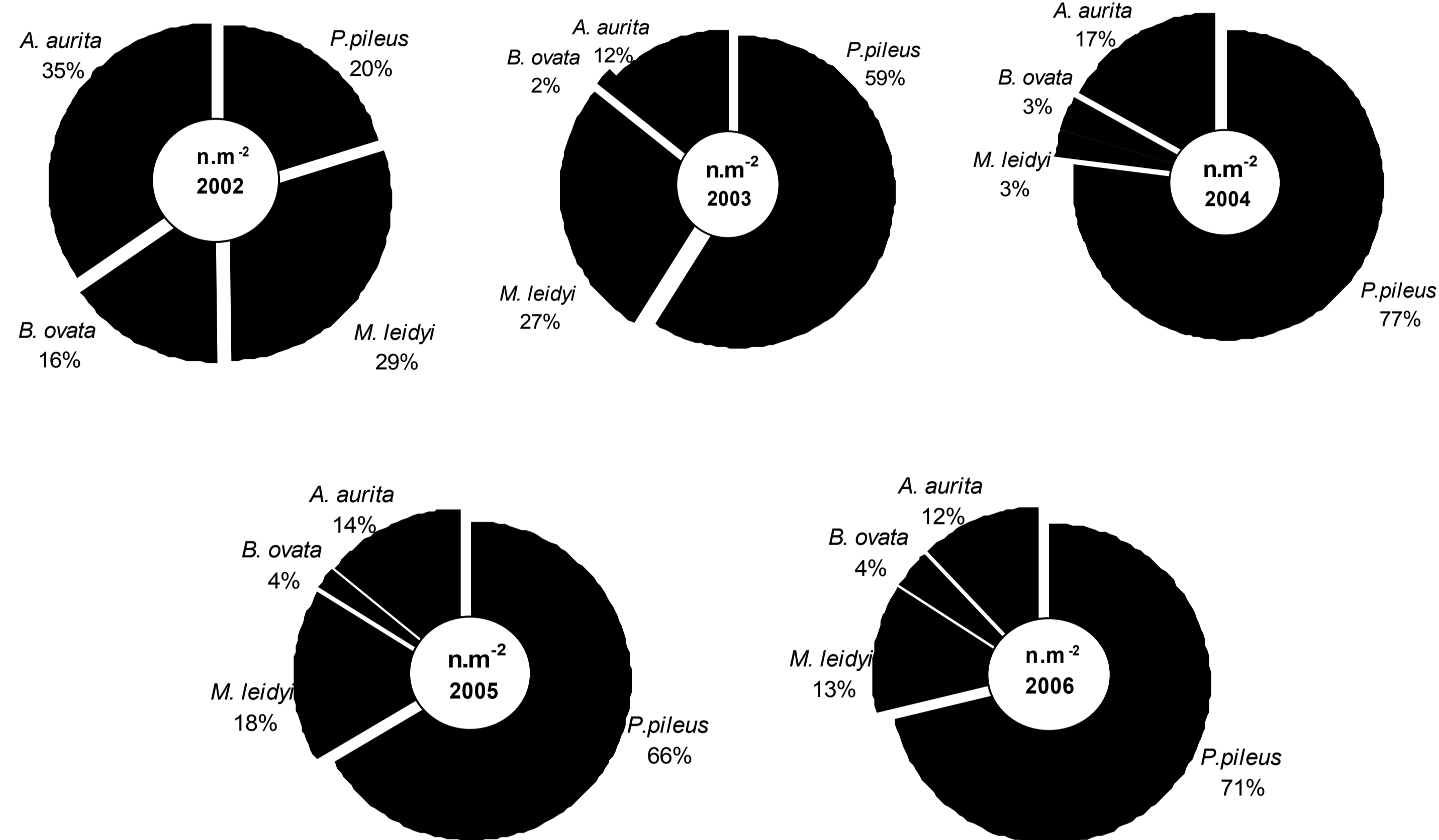
Gelatinous macrozooplankton is an important consumer of zooplankton and ihtiyoplankton. Therefore, the increase of gelatinous macrozooplankton causes problems in the ecosystem. In this study, seasonal distribution, biomass and abundance of gelatinous macrozooplankton (*Aurelia aurita*, *Pleurobrachia pileus*, *Mnemiopsis leidyi* and *Beroe ovata*) at the central southern Black Sea (Sinop Peninsula) were studied using vertical tows from stations at biweekly or monthly intervals between January 2002 and November 2006.



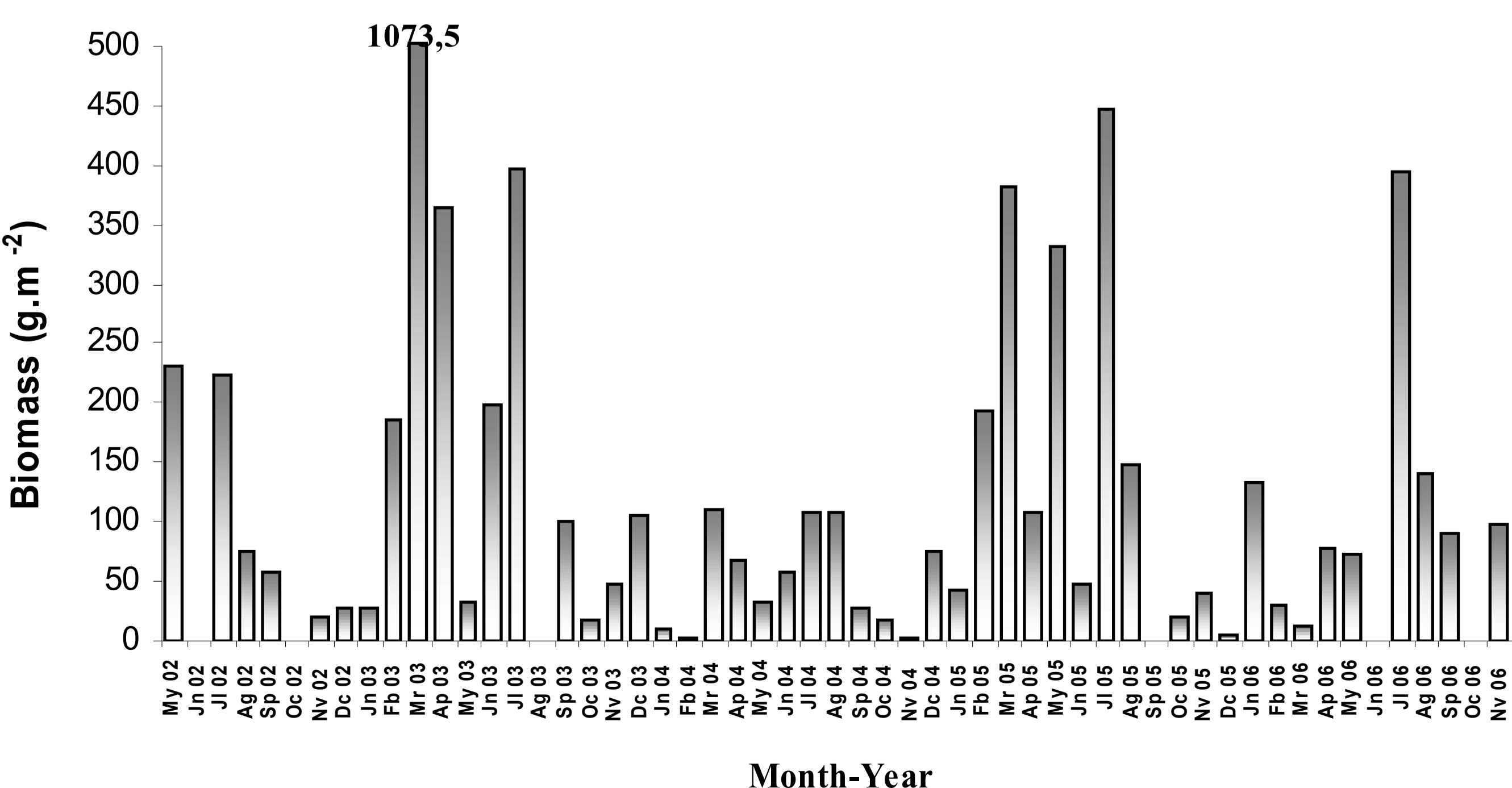
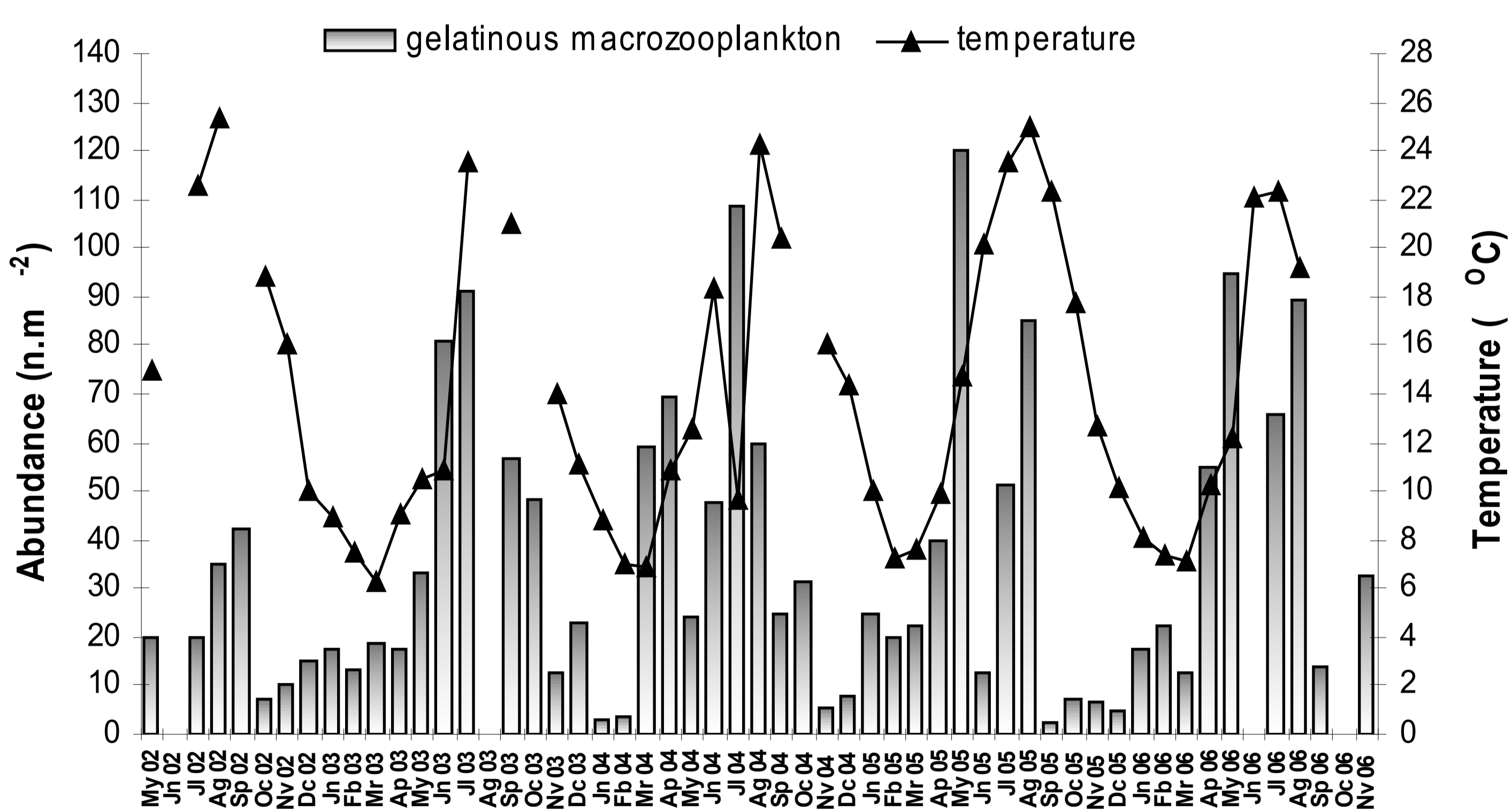
ABSTRACT

RESULTS

The abundance (number(n).m⁻²) and biomass (g. m⁻²) of gelatinous macrozooplankton increased in spring and summer with the rising water temperature. During the study period, the most abundant biomass of gelatinous macrozooplankton were obtained on May 2005 with 120 n.m⁻² and March 2003 with 1073.5 g.m⁻². The maximum abundance values of gelatinous macrozooplankton were determined as 42.5 n.m⁻² on September 2002, as 91.25 n.m⁻² on July 2003, as 108.33 n.m⁻² on July 2004 and as 95 n.m⁻² on May 2006. High biomass values were achieved at 230 g.m⁻² on May 2002, 111.3 g.m⁻² on March 2004, 447.75 g.m⁻² on May 2005 and 393.33 g.m⁻² on July 2006, respectively. Minimum abundance and biomass of macrozooplankton amounts were found in winter sampling periods in each year of the study period. In this study, we estimated a decrease of gelatinous macrozooplankton when compared with data from 1999 (Unal, 2000). However, it increased from 2003 to 2006 when compared to data for the year 2002 [1],[2].



In terms of annual abundance, *A. aurita* was the dominant group in 2002, whereas *P. pileus* was the highest abundance group in 2004, 2005 and 2006. This species had a similar value in 1999 (%65) (4). Moreover, *B. ovata* was found to have a very low density, except in 2002. In 2000, *B. ovata* was found to constitute 2% of all gelatinous species [3]. The percentage of *M. leidyi* decreased from 2002 to 2006. In 1999, *M. leidyi* was found to constitute about 58 % of all gelatinous species in the coastal station. This value decreased to 24 % at the open station (4).



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