



## **Development and growth of *Temora longicornis* - numerical simulations using a laboratory culture data**

Anna Lemieszek (1), Lidia Dzierzbicka-Glowacka (2), and Maria Zmijewska (1)

(1) Institute of Oceanography, University of Gdansk, Gdynia, Poland (anna\_lemieszek@wp.pl), (2) Institute of Oceanology, Marine Dynamics, Sopot, Poland (dzierzb@iopan.gda.pl)

Quantitative expressions are presented to describe the effects of temperature and food concentration on development time and growth rate of *Temora longicornis* for each of the model stage groups (N1-N6 – naupliar stage, C1, C2, C3, C4, C5 – the five copepodid stages). The calculations were made on the basis of experimental data from the literature for *T. longicornis* from the south-eastern and the southern North Sea. Relationships were obtained between the growth parameters and temperature for the 5-20°C temperature range and food concentrations from 25 mg C m<sup>-3</sup> to excess. Also computed was the total development time as a function of the above-mentioned parameters, temperature and food availability. The simulations computed here are similar to the experimental results. The growth rates for successive stages were obtained according to the correction of the ‘Moult Rate’ method that allows use of mean weights and durations of stages.