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# The effect of food concentration on the growth rate and stage duration of Temora longicornis. Numerical simulations

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The paper presents an empirical model describing the growth rate and stage duration of specific size-classes of *Temora longicornis*. The quantitative expressions describing the effect of food concentration on the above parameters were developed. The stage duration of *Temora longicornis* was calculated on the basis of experimental data. According to these data, the growth rates of *Temora longicornis* were obtained by the numerical solution of polynomials of the appropriate degrees. The polynomials were described by:

$$(W_i + W_i\, g\text{max}\,)\,\left(1 + g\text{max} + g^2_{\text{max}} + \ldots + g^n_{\text{max}} + g^d_{\text{max}}\right) \;= W_{i+1}$$

where $W_i$ is the mean body weight of specific size-classes, $D = n + d$ is the stage duration

and $D$is a known quantity and $g_{max}$ is the growth rate. Empirical model computed here may be used with good precision in mathematical models of pelagic communities.