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## THE EFFECT OF FOOD CONCENTRATION ON THE LIFE HISTORIES OF *Brachionus plicatilis* (O.F.M.) AND *Enicentrum linnhei* SCOTT

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### Abstract

The effect of food quantity on the life histories of *Brachionus plicatilis* and *Enicentrum linnhei* was studied in replicated individual cultures at 20°C and at seven food concentrations (from 0.1 to  $10 \times 10^4$  cells/ml or 0.26 to 26.32  $\mu\text{gC/ml}$ ) of the chlorophycean flagellate *Brachiomonas submarina*. The lowest food concentration at which *E.linnhei* was able to survive and produce eggs was  $5 \times 10^3$  cells/ml (1.32  $\mu\text{gC/ml}$ ) compared with  $2 \times 10^3$  cells/ml (0.53  $\mu\text{gC/ml}$ ) in *B.plicatilis*, but it is clear from several life cycle parameters that food levels of  $5 \times 10^3$  cells/ml or lower are all limiting for *B.plicatilis* growth and reproduction. Maximal egg production was achieved in both species at  $7.5 \times 10^4$  cells/ml (19.74  $\mu\text{gC/ml}$ ) although the food range for maximal egg production was wider in *B.plicatilis* ( $2.5 \times 10^4$  to  $10^5$  cells/ml). In both species, maximal egg production was the result of a minimum interval between egg laying.

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Jahresbericht der Biologischen Station Lunz](#)

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Artikel/Article: [THE EFFECT OF FOOD CONCENTRATION ON THE LIFE HISTORIES OF \*Brachlonus plicatilis\* \(O.F.M.\) AND \*Encentrum linnhei\* SCOTT 187](#)