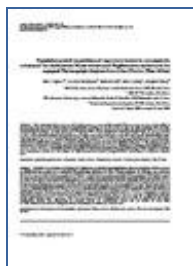


Population growth capacities and regulatory factors in monospecific cultures of the cladocerans



The cladocerans *Moina micrura* and *Diaphanosoma excisum* and the copepod *Thermocyclops decipiens* were studied in microcosms (0.8 m³) under semi-controlled experimental conditions at 25–29 °C for 32 days, by daily sampling after an initial monospecific inoculation. For each species, the time series began with an exponential population growth phase. *M. micrura* showed a higher daily population growth rate (mean = 1.19) than *D. excisum* (0.78) and *T. decipiens* (0.45). The growth phase of *M. micrura* coincided with bacterial and phytoplanktonic peaks while the growth phase of the two other species followed these peaks. After this phase, *M. micrura* quickly disappeared (day 10), while *D. excisum* biomass decreased but showed a second increase, followed by a stabilization sequence. *T. decipiens* biomass had a slower increase and stabilized after day 17. The passage to sexual reproduction in relation to crowding was the main regulating factor for *M. micrura*, whereas food limitation was important for *D. excisum*. For *T. decipiens*, population growth was limited by decreased recruitment to copepodite stages which could have resulted from

cannibalism exerted by older stages.

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