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Can zooplankton secondary production models predict growth in the marine mysid *Leptomysis lingvura* (G.O. Sars, 1866)?

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Zooplankton growth and secondary production are key input parameters in marine ecosystem models, but their direct measurement is difficult to make. Accordingly, zooplanktologists have developed several statistical-based secondary production models. Here, three of these secondary production models are tested in the marine mysid *Leptomysis lingvura* (Mysidacea, Crustacea). Mysid length was measured in two cultures grown on two different food concentrations twice a day. The relationship between length and dry-mass was determined in a pilot study and used to calculate dry-mass from the experimental length data. Growth rates ranged from 0.11 to 0.64 day-1, while secondary production rates ranged from 1.77 to 12.23 mg dry-mass day-1. None of the three selected models were good predictors of growth and secondary production in this mysid species.

Keywords: Secondary production, growth rate, mysid, models, dry-mass.

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