

Coprophagy in copepods and in a natural zooplankton community - DTU Orbit (08/08/2016)

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Sediment trap studies have revealed that often only a minor fraction of the zooplankton fecal pellet production leave the upper ocean, and it has been suggested that copepod grazing on pellets (coprophagy) is the reason for this. A simple model is here used to estimate rate of coprophagy from lab and field observations. In the lab *Acartia tonsa* and *Temora longicornis* have coprophagous behavior and clear fecal pellets at a rate of 10-15 ml/female/d. Observations of fecal pellet production, sedimentation, and abundance collected during a 10-d late summer study in the North Sea revealed that less than 5 % of the fecal pellet production in the upper 50 m was lost as flux below 50 m depth. Estimates of coprophagy rates showed, however, that the zooplankton community > 200 μ m could account for only a few percent of the fecal pellet loss. Thus, plankton organisms < 200 μ m must be responsible for the degradation of the fecal pellets

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