

Particle-colonising copepods in the subarctic food webs: Feeding and reproduction of *Microsetella norvegica* and *Triconia* spp. in the North Atlantic

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Small particle-colonizing copepods from genus *Microsetella* and *Triconia* are extremely abundant in diverse arctic and subarctic areas, including both fjords and open ocean. However, we know little of their importance for pelagic food webs, or what controls their abundance or production. In the present study, we compared the abundance and egg production of *Microsetella norvegica* and *Triconia* spp. in Greenlandic fjords and open North Atlantic to chl-a and hydrography in these areas, as well as performed laboratory incubations to investigate their functional response of feeding on different types of marine snow particles. We hypothesized that both species will have highest abundances in the pycnocline where marine snow particles are retained and encounter rates can be maximized. Our results show large differences in encounter rate and handling time depending on the marine snow type, with typically higher encounter and maximum ingestion rates for detritus aggregates, compared to fresh phytoplankton aggregates or appendicularian houses. However, both species could obtain high ingestion rates (close to 100% body weight<sup>-1</sup> d<sup>-1</sup>) on most types of marine snow particles, suggesting that quantity rather than quality of marine snow determines the feeding rate. A preliminary analysis of abundance and egg production suggests that particularly *M. norvegica* can obtain high egg production rates in the surface layer during the summer, and that temperature rather than phytoplankton concentration influences the in situ reproduction of this species.

Key words: *Microsetella*, *Triconia*, functional response, marine snow, reproduction, temperature, chl-a

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