



Settling blooms of filamentous cyanobacteria as food for meiofauna assemblages

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Limnol. Oceanogr., 53(6), 2008, 2636-2643 | DOI: 10.4319/lo.2008.53.6.2636

ABSTRACT: Summer blooms of filamentous nitrogen-fixing cyanobacteria in the Baltic Sea are normally dominated by *Aphanizomenon* sp. and the toxin-producing *Nodularia spumigena*. In a 2-week laboratory experiment, we followed the uptake by representative benthic meiofauna species of ¹⁴C-labeled organic carbon from blooms, each dominated by one of these cyanobacteria. Natural bloom material was collected and labeled by incubation with NaH¹⁴CO₃. Uptake of cyanobacterial carbon was recorded for the major meiofauna taxa living in the first-centimeter layer, namely ostracods, harpacticoids, and nematodes. The uptake rates were within the range found for diatoms in other studies, indicating that cyanobacteria may be an important food resource for the meiobenthos. The uptake of cyanobacterial carbon varied significantly among species, even within the same class. The ostracod *Candona neglecta* showed the highest uptake values, whereas two other ostracod species took up very little of the label. There was no significant difference in utilization of carbon from *Aphanizomenon* sp. and *N. spumigena* and no reduction in the abundance of the meiofaunal taxa analyzed compared to unexposed controls, indicating that Baltic meiofaunal assemblages in general experience no mortality when exposed to settled cyanobacteria, even the hepatotoxic *N. spumigena*.

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