

SEASONAL FLUCTUATIONS AND PRODUCTION OF NEMATODE COMMUNITIES IN THE  
BELGIAN COASTAL ZONE OF THE NORTH SEA

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Nematodes are the most abundant multicellular animals in marine sediments; they are also the only metazoans which survive in heavily polluted areas.

The seasonal fluctuations of the nematode community of a heavily polluted silty sand station along the Belgian east coast was examined based on the monthly samples during 1983-1985. The mean density of the total community varied between 55 ind./10 cm<sup>2</sup> (Feb.1983) and 5610 ind./10 cm<sup>2</sup> (Jun.1985). 32 species were found in this station; only four species have a frequency higher than 50 %. They are all non-selective deposit-feeders. Reproduction appeared to be continuous, although an increase in reproductive activity appeared in spring and autumn.

The seasonal fluctuations of density, age structure and the yearly P/B were determined for *Sabatieria punctata*, *Daptonema tenuispiculum*, *Ascolaimus* sp.1 and for the whole community. The yearly P/B for *S. punctata* varies between 14.1 (1985) and 16.9 (1983); for *D. tenuispiculum* between 28.5 (1985) and 31.9 (1983); for *Ascolaimus* sp.1 between 11.5 (1985) and 14.8 (1983) and for the whole community between 16.2 (1985) and 18.1 (1983).

These are the first estimations of P/B ratios for nematode communities in the Southern Bight of the North Sea. From this, it appears that nematodes are a significant component in the energy flow of shallow-water ecosystems.