

Metadata Details

Title

Functional diversity of Heterotrophic Bacteria in the water column and surficial sediments of Kongsfjord with special reference to those involved in carbon cycle.

Science Keywords

Category	Oceans
Topic	Marine Biology
Expedition Year	2017-2018
ISO Topic	Oceanography

Summary

Abstract

Heterotrophic bacteria play major role in the mineralisation of diverse organic substances available in the marine environment and contribute to productivity in a significant manner. Heterotrophic bacterial consortiums play key role in the breakdown of large molecular weight substances to smaller entities which will be further taken inside by the bacteria and utilized for metabolism. This way they convert lot of dissolved organic matter (DOM) to particulate organic matter (POM). The metabolism also leads to release of DOM by bacteria which in turn utilised by other members of the community. While the organic matter being transported from the surface to the bottom, the easy to digest fractions are being used up in the water column and hard to digest structural materials are likely to reach the bottom where they will be used up by the heterotrophic bacterial community in the surficial sediments as well as those residing within certain depth of the sediment.

Purpose

Heterotrophic bacteria play major role in the mineralisation of diverse organic substances available in the marine environment and contribute to productivity in a significant manner. Heterotrophic bacterial consortiums play key role in the breakdown of large molecular weight substances to smaller entities which will be further taken inside by the bacteria and utilized for metabolism. This way they convert lot of dissolved organic matter (DOM) to particulate organic matter (POM). The metabolism also leads to release of DOM by bacteria which in turn utilised by other members of the community. While the organic matter being transported from the surface to the bottom, the easy to digest fractions are being used up in the water column and hard to digest structural materials are likely to reach the bottom where they will be used up by the heterotrophic bacterial community in the surficial sediments as well as those residing within certain depth of the sediment.

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