

Metadata Details

Title

Arctic Viral Communities

Science Keywords

Category	Biological Classification
Topic	Viruses
Expedition Year	2015-2016
ISO Topic	Biota

Summary

Abstract

Viruses are the most abundant biological entities on the planet and are the reservoir of most of the genetic diversity in the sea. Every second, approximately 1023 viral infections occur in the ocean and these infections are a major source of mortality of marine organisms. In marine systems, virus-mediated processes have significant impacts on marine communities and are a major force behind biogeochemical cycles. However, the viral genetic diversity remains poorly characterized. Virus affect mortality and thereby influence the diversity of autotrophic and heterotrophic marine microbial communities; in turn this affects global geochemical cycles (Fuhrman,1999; Wommack and Colwell, 2000; Weinbauer, 2004;Suttle, 2005, 2007). Approximately 50% of bacterial production and up to 26% of the total organic carbon fixed by photosynthesis is lost through viral lysis each day (Fuhrman, 1999; Wilhelm and Suttle 1999).

Purpose

Viruses are the most abundant biological entities on the planet and are the reservoir of most of the genetic diversity in the sea. Every second, approximately 1023 viral infections occur in the ocean and these infections are a major source of mortality of marine organisms. In marine systems, virus-mediated processes have significant impacts on marine communities and are a major force behind biogeochemical cycles. However, the viral genetic diversity remains poorly characterized. Virus affect mortality and thereby influence the diversity of autotrophic and heterotrophic marine microbial communities; in turn this affects global geochemical cycles (Fuhrman,1999; Wommack and Colwell, 2000; Weinbauer, 2004;Suttle, 2005, 2007). Approximately 50% of bacterial production and up to 26% of the total organic carbon fixed by photosynthesis is lost through viral lysis each day (Fuhrman, 1999; Wilhelm and Suttle 1999).

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