

Metadata Details

Title

Chroococciopsis, A Cryptoendolithic Cyanobacterium From Larsemann Hills, East Antarctica

Science Keywords

Category	Biological Classification
Topic	Bacteria/Archaea
Expedition Year	2015-2016
ISO Topic	Biodiversity and Biotechnological Potential

Summary

Abstract

Cryptoendolithic microbial communities represent a significant micro ecosystem in Antarctica. Lichens, fungi and algae are the integral components of this bio me. In the present communication a cryptoendolithic cyanobacterium, Chroococciopsis is reported from the bed rock of Larsemann Hills, East Antarctica.

Purpose

Cyanobacteria are the extreme-tolerant microorganisms growing on every light-exposed niche in the harshest environment of Antarctica. They not only form slimy benthic bio-films in the aquatic habitats but also colonize on the soil and rock surfaces and sometimes refuge within the rocks, called as endoliths. This high degree of plasticity in the cyanobacteria life style is promoted by low amount of available substrata, extreme climatic conditions and the short period favorable for growth in Antarctica (Hawksworth, 2005). These microorganisms prefer the inside of rocks rather than their surfaces, because of the wide thermal fluctuation on the exposed surfaces leading to their sterility for microbes, while the stable nano-climatic conditions within the rock provide a much suitable ambience (Nienow & Friedmann, 1993; de los Rios & al., 2003). The endolithic colonization can be viewed as a stress avoidance strategy, where overlying mineral substrate provides efficient protection from letha.

Data Center