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# Distribution of aerophilous diatom communities associated with terrestrial green macroalgae in the South Shetland Islands, Maritime Antarctica - PROTOCOL

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## Abstract

The establishment of diatom communities depends on environmental factors such as the type of substrate and geographic conditions that influence the dispersal processes of these organisms. The main goal of this study was to evaluate the similarity between diatom communities associated with the macroalgae *Prasiola crispa*(Lightfoot) Kützing in relation to spatial distance from six sampled sites located in the South Shetland Islands, Maritime Antarctica. The diatom flora associated with *Prasiola crispa*was represented by 23 species distributed in 15 genera. *Pinnularia australoschoenfelderi*Zidarova, Kopalová & Van de Vijver, *Luticolaaustroatlantica*Van de Vijver, Kopalová, S.A.Spaulding & Esposito, *Luticolaamoena* Van der Vijver, Kopalová, Zidarova & Levkov, *Pinnularia austroshetlandica*(Carlson) Cleve-Euler and *Psammothidium papilio*(D.E. Kellogg et al.) Kopalová & Zidarova were the most abundant species in our samples, which together represented 68% of the total number of individuals collected. There is a great similarity in composition and abundance of the diatom community among the sampled points., which resulted in the absence of a linear pattern of relationship with the distance between sampling points. We conclude that distance was not a factor of differentiation of Antarctic diatom communities associated with terrestrial green macroalgae. Suggesting that Antarctic environments may have unique characteristics with homogeneous abiotic factors, at least related to this substrate.

## Attachments

DOCX

LABORATORY PROTOCOLS...

17KB

## Materials

MATERIALS

- Potassium permanganate
- GE Polycarbonate Membrane filter **Catalog #**MAINE 1216611
- Hydrogen peroxide
- Naphrax

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