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FRESHWATER ALGAE COMMUNITY OF A MELTWATER RUNNEL, REEVE HILL, CASEY STATION, ANTARCTICA

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The runnel of Reeve Hill, (66° 16.855'S, 110° 31.045'E) Casey Station, Antarctica which occurs intermittently only during the brief austral summer are colonized by microalgae dominated by Cyanobacteria mats and diatoms. A total of 22 microalgae species was recorded during the study. The upper runnel area was dominated by freshwater filamentous Cyanobacteria while the lower runnel with higher salinity readings showed total dominance of planktonic marine diatom species. The middle area however differs from the upper area. The middle runnel was completely covered in a tunnel and the water was slow flowing. This changes the algae community from filamentous Cyanobacteria to unicellular green algae, *Chlorococcum* sp.. Significant changes in species composition however were observed in the lower runnel sample. Due to intrusion of sea water, direct exposure to sunlight and the influence of sea current, species community in the area consists mainly of one family, the marine planktonic Bacillariophycea. The most abundant species was the marine diatom, *Corethron criophilum* which was a common cold-water species. Other species detected included *Flagilaria kerguelensis, Flagilaria linearis, Eucampia antarctica, Thalassiosira tumida*., *Pseudonitzschia lineola, Pseudonitzschia turgiduloides, Achnanthes brevipes* and *Odontella litigiosa.* Results from the study indicated a distinct colonization pattern of algae throughout the runnel. Species composition showed distinct changes in colonization patterns along the salinity gradient, exposure to sunlight and water flow.