



Comprehensive study on soil bacterial community composition on Barton Peninsular and around Terra Nova Bay, Antarctica

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Abstract

Antarctica is the coldest and driest continent in our planet. Over the last few decades, the terrestrial ecosystems in Antarctica had been recognized as an aseptic place because of the extreme habitat conditions for life. With the dedicated terrestrial biological research, we begin to understand the uniqueness and complexity of these fragile ecosystems. Through the application of molecular techniques and further development of next generation sequencing technology in microbiology era, we realized that the microorganisms are highly diverse and their community structure is much more complex. In ecological function in these harsh habitats containing simple diversity of flora and fauna, microorganisms paly more significant role. Therefore, it is important and essential to understand what the dominant bacterial taxa are and what environmental variables predict bacterial community structure. Here in this presentation, the study on soil bacterial community structures and the correlation with physicochemical properties on Barton Peninsular in King George Islands of Antarctic Peninsular and around Terra Nova Bay in Victoria Land will be presented and discussed.

Keywords: Antarctica; Barton Peninsular; Terra Nova Bay; 16S rRNA gene; Bacteria; physicochemical properties