

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/338066080>

# MICROBIAL ABUNDANCE REFERENCE TO THE E.coli IN THE WATER COLUMN AT CASURINA REEF, JAFFNA NORTHERN, SRI LANKA

Conference Paper · December 2018

CITATIONS

0

READS

14

3 authors, including:



**Sivashanthini Kuganathan**  
University of Jaffna

74 PUBLICATIONS 251 CITATIONS

[SEE PROFILE](#)



**D. M. Rajitha Sankalpa**

Institute of Deep-sea Science and Engineering, Chinese Academy of Science

4 PUBLICATIONS 1 CITATION

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



population dynamics of *Gerres oblongus* [View project](#)



Mapping and restoration of ponds [View project](#)

**MICROBIAL ABUNDANCE REFERENCE TO THE *E.coli*  
IN THE WATER COLUMN AT CASURINA REEF, JAFFNA  
NOTHERN, SRI LANKA**

**D.M.R. Sankalpa<sup>1\*</sup>, S. Kuganathan<sup>2</sup>, A.C. Thavaranjith<sup>3</sup>**

<sup>1</sup>Casurina, Karainagar, Jaffna

<sup>2</sup>Department of Fisheries, University of Jaffna, Jaffna, Sri Lanka

<sup>3</sup>Department of Botany, University of Jaffna, Jaffna, Sri Lanka

<sup>1</sup>rajjadissanayake@gmail.com

Coral reefs ecosystems are sensitive to global changes in climate and human activities. The relationship between microbial activity and chemical substances available in the water column due to sensitive process from climate to human activity is not very clear. This area of research is needed to understand the ecosystem processes for conservation initiatives. Therefore this study aims to identify the current status of shallow coral reef Casurina at Karainagar Jaffna North Sri Lanka (9°46'19.75"N, 79°53'33.47"E) from August 2015 to of April 2016, with reference to *E.coli* as an indicator, activity and quality of water in reef water. Chemical conditions of sea water were measured, following parameters were used to assess viz. Dissolved Oxygen (DO), Temperature (T), Salinity (S), Depth (D), (pH) . *E.coli* and Total Bacterial abundance was measured using direct counting method. Also culture experiments to show the microbes' selective agar plates (Endo Agar for *E.coli* and, Nutrient Agar for total bacteria). Results disclosed that water quality (DO=9.78 ± 0.31 ppm, T=29.53 ± 1.76°C, S=34.5 ± 3.42ppt, D=0.56 ± 0.08 m, pH=8.10 ± 0.12) and microbial abundance (MA) (mean Total MA= 6.81×10<sup>6</sup> ml<sup>-1</sup>, mean *E.coli* abundance = 3.96×10<sup>6</sup> ml<sup>-1</sup> at Casurina reef were within the range of suitable condition for growth of corals and other associated organisms. Continuous monitoring is essential to describe the situations with relation to changes of climate of human activity.

**Keyword:** coral, seawater, Casurina, *E.coli*, water column