Abstract

Title: MEIOFAUNAL ENVIRONMENTAL IMPACT ASSESSMENT OF THE SOUTHWEST COASTLINE OF TRINIDAD

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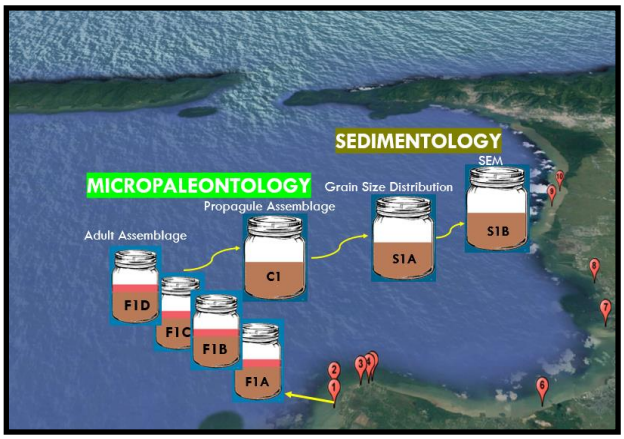
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Keywords: Corexit 9500A, Sediment, Benthonic Foraminifera, Oil Spill

I. Abstract Body (up to 250 words)

A survey of the SW Trinidad coastal foraminiferal community was conducted in May and June 2016 to investigate the prolonged effects of an oil spill that occurred in December 2013 and subsequent remedial efforts using the dispersant Corexit 9500A. At 10 stations, between La Brea and Caroni Swamp, the surface sediment was collected and mixed with a solution of alcohol and rose bengal which stains the test of live specimens at the time of sampling. An initial qualitative examination of the foraminiferal assemblages recovered at each station suggest high abundances of >200 specimens per sample, low species richness, between 5 and 10 species, and very few stained tests. These observations suggest a massive die-off of the benthonic foraminiferal community similar to that observed in the Gulf of Mexico following the 2010 Deepwater Horizon oil spill and use of Corexit. Foraminiferal propagules were cultured to identify significant differences between adult and juvenile populations, since foraminifera propagules can remain dormant up to two years in unfavourable conditions. However, initial observations of the culture samples indicate little difference between adult and propagule foraminiferal populations. Traces of chemical compounds common to Corexit [Propylene glycol, Propanol (OH)] will be detected using scanning electron microscopy of the sediment grains collected. Sediment grain size and sorting will be analysed in relation to foraminferal species distributions and abundances. The results of this study will contribute to a better understanding of the prolonged ecological effects of Corexit and serve as a baseline survey for future comparisons of the benthonic foraminiferal communities.

II. Image:



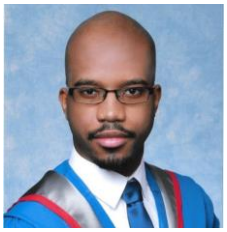
III. Reference:

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IV. Biography:

Mr. Dominic Waldron has completed his BSC at the age of 24 years from The University of The West Indies (U.W.I), St. Augustine Campus, Trinidad & Tobago. He is currently enrolled to pursue a MSC degree in Renewable Energy Technologies at the U.W.I.

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