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Subject: Rocky shore monitoring
Date: 30 March 2016 at 1:51:33 PM SAST
To: Graeme Bird <graeme@poison.city>

Hi Graeme

Below is a summary of the work and methods as described by the student in my honours group conducting the first study using fixed transects along our coast.

ROCKY SHORE COMMUNITY DYNAMICS: ZOANTHID COMMUNITIES.

SUMMARY

The aim of my research work is to quantify the abundance and distribution of Zoanthids at four Rocky Shore sites along the KwaZulu-Natal Coast by counting the number of zoanthids present in 0.5x0.5m quadrants across shore along a transect that starts from the littoral zone to the low shore. This will be done to try and assist in fulfilling the broad objective of the rocky shore monitoring and other biodiversity programmes, which is to ensure that marine and coastal management decisions in KZN are based on sound ecological principles and are founded on the best available scientific information. At the moment the coastal zone is subjected to acute anthropogenic-related impacts as it is the most accessible part of the ocean to humans. The rocky shore systems, especially, are subject to immense pressures including harvesting, pollution and coastal development. Ezemvelo KZN Wildlife manages and conserves the biodiversity in the KZN province, for them to be able to effectively manage these areas, they need to know the condition of, and have a good understanding of the processes that affect its health and functioning. To collect this information, they established a long term monitoring programme to observe changes in order to understand natural or artificially-induced processes that may cause a shift in community composition or species diversity. The expected output is that the results produced will be useful in the detection of changes in the community structure over time and thus to influence management decisions that govern activities affecting the rocky shore.

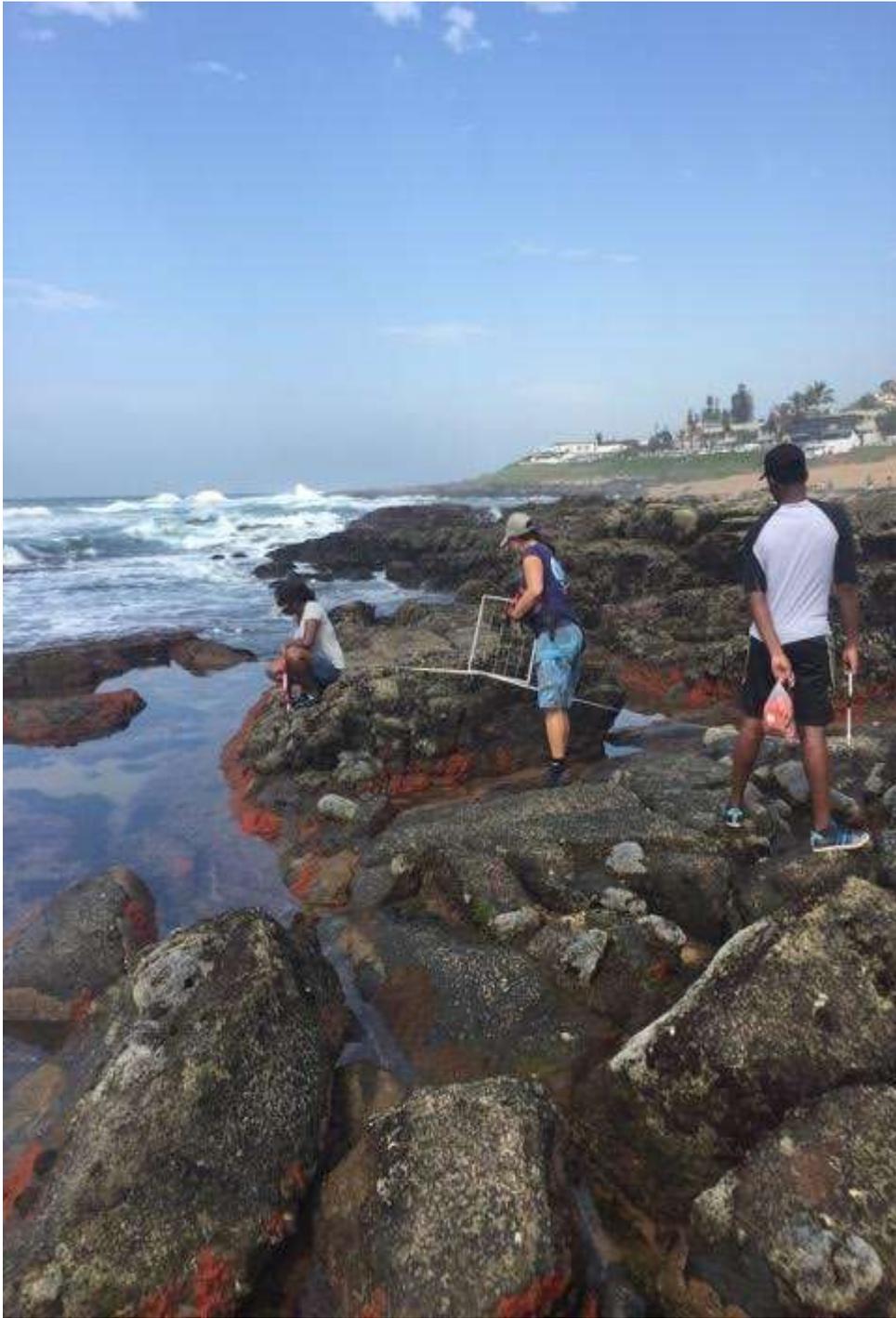
Methods

Sampling will be done at spring low tide when most of the rock's area is exposed. At the highest point in the littoral zone two holes are drilled into the rock, a wall plug is hammered into each hole, then a bolt with a washer and a colourful marker is fitted into each hole. 5m is measured from the bolt on the right (facing the ocean), the purpose is to move in a straight line from the littoral zone to the mussel/ algae beds but to avoid pools and contours a kinky line is made instead, which is a line that zigzags in order to get around structures that produce low quality images, at the 5m point another bolt marker is placed, this is repeated every 5m until the mussel beds/algal beds are reached. The line transect will be placed along the markers and the 0.5 m x 0.5 m quadrant will be placed on the right side (facing the ocean) of the transect at every meter and an image will be taken, between two markers 5 images are taken, at 0m, 1m, 2m, 3m, and 4m.

Philile Emelda Mvula



a reference bolt



Collecting data

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