

Aberdour rocky shore



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Aberdour Rocky Shore Report Introduction This report is based on the averaged data gathered to examine the biodiversity and zonation patterns at Hawcraig Point in Aberdour. The data give a generalised picture of the distribution of organisms on exposed shore (Site C) and sheltered shore (Site A and Site B). The report will be aimed at addressing certain issues regarding the analysis of the information obtained through the collected data.

Comparison between the Zonation Patterns of Site A and Site B Site A and Site B do not appear to have similar zonation patterns. For example, at a vertical height of 4.79 m above the water line at Site A, the % cover statistics for orange and grey lichens are 5 and 30 respectively. Above 4.82 m from the water line at Site B, the % cover statistics for orange and grey lichens are 5 and 5 respectively. Hence, the scope of symbiotic colony of fungi and algae is limited at Site B. Again, % cover of fucus vesiculosus in Site A at .83 m above the water line is 30 while that in Site B at the same height is 10. Site B, therefore, appears to be less habitable by the seaweed population. This can be suggestively explained by topological variations.

Rock structures in Site B appear to be more rugged, hence there are greater tidal activities in the splash fringe level. This might have given rise to a washing mechanism that created different zonation patterns in Site B as compared with Site A. Differences between Exposed and Sheltered Shores In the exposed rocky shore, splash zones are large and there is maximum splashing from due to the waves. The area is dominated by organisms which can cling on tightly (for example, limpets and barnacles). Seaweeds are fewer and zonation patterns are clearer. The biodiversity and biomass are generally low. (Boorman, 1993) In the sheltered rocky shore, splash zones

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are narrow and there is less splashing due to the waves. A wide range of organisms is found in these areas. Seaweeds grow in large amounts and the zonation patterns are often not differentiable (i. e., zone borders are unclear). Biodiversity and biomass are generally high. (Boorman, 1993)

Source: Marine Ecosystems - Zonation features on seashore 2011 Analysis of Associations between Animals and Seaweeds The ecosystem of an area depends on how the organisms acquire food. Particularly in the case of animals, the factor of food availability and the conditions of natural vegetation are crucial. In Site C, the *fucus vesiculosus* and *fucus spiralis* populations are almost negligible. Noticeably, the snails like *littorina littorea* and *littorina obtusata* have a low numerical count per sq. m. in this region. But in Site A and Site B, varieties of *fucus* are preponderant and hence the numbers of snails are significantly high. However, barnacles are more preponderant in Site C, but this can be explained by their higher clinging abilities. In sum, it can be stated that there are positive associations between the animals and seaweeds on the shores examined. Conclusion Site B appears to be less ideal as an example of sheltered rocky shore. The association between animals and seaweeds appear to be positive in general. The intricacy of the data that has been provided for the research has been immensely helpful in drafting this report. Reference List Boorman, L. A. (1993) Dry coastal ecosystems of Britain: Dunes and single beaches. In: E van der Maarel, ed. 1993. Dry Coastal Ecosystems: Polar Regions and Europe. London: Elsevier. O'Donnell, T. (2011) Marine Ecosystems - Zonation features on seashore. Available: <http://www.tonya.me.uk/Marine/tidalzones.asp>. Last accessed 20 May, 2011.