A Comparison Between Two Rocky Shore Ecosystems on Two Different Coastlines

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Purpose We examined the marine macro-life at two rocky shore sites at Africa's southern tip. Kreeftebaai, on the western side, is affected by the Benguela Current, and Suiderstrand, on the south-eastern coast, by the Agulhas Current. We hypothesized that Kreeftebaai would have more variety and abundance of macro-organisms, due to the nutrients carried down by the Benguela Current. The documentation of the composition of marine rocky shores is important for understanding the effects of climate change on the coastlines. Method Transects were profiled and sampled using a quadrat of 25cm 2 at two sites, Suiderstrand and Kreeftebaai, during Spring tide. Marine life for each quadrat was documented, and water samples were taken to assess pH and Salinity. Water and air temperatures were recorded. Photographs and notes were taken. Results The Suiderstrand (East Coast) rocky shore quadrats had a wider species diversity, with fewer individuals per species. The Kreefdebaai (West Coast) rocky shore quadrats had a narrower range of species than at Suiderstrand, but had more individuals per species, and had a clearer zonation pattern. Differences in pH and salinity of the water samples was limited. Conclusion Because of the longer and gradually sloping beach of Suiderstand, and its protected rocky intertidal zone, greater species diversity was found. Due to Kreefdebaai's short intertidal zone and invasive species, there was less species diversity, but more abundance. The hypothesis was partially rejected, due to Suiderstrand having a larger species diversity, but Kreefdebaai having a larger number of individuals within the species.

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