

Benthic Habitat Mapping and Monitoring



Project Objectives

To acquire a data set for all benthic habitats and the marine environment that allows: recognition of environmental and habitat changes, identification of possible causes of recent or ongoing habitat changes, and determination of limiting environmental factors on the platform.

Photos by Sarah Manuel and Kathy Coates

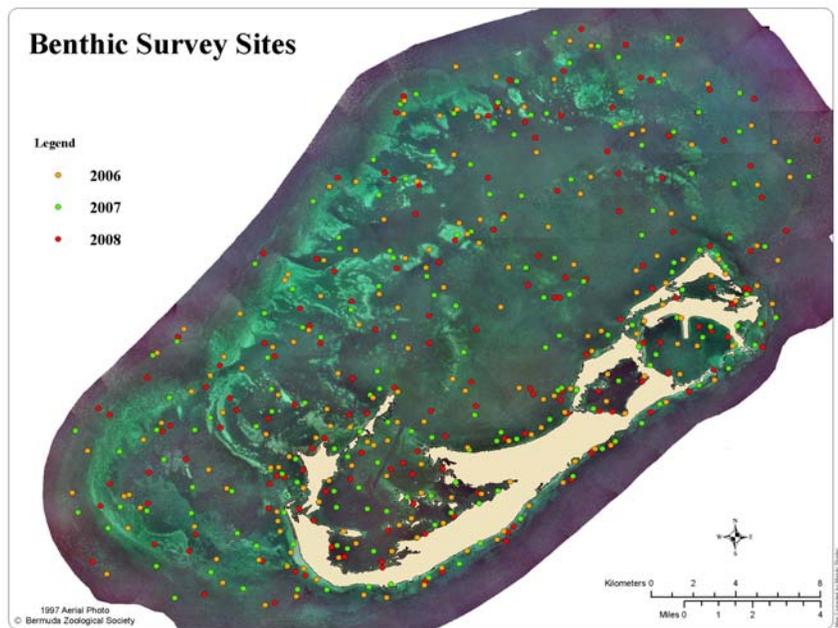
Summary

The Bermuda Islands are surrounded by clear waters with pristine coral reefs, diverse mangrove communities and seagrass and algal beds. These are all benthic habitats, i.e. they are plants and animals that live on the bottom of the sea. Each benthic habitat is of high ecological and economic value and they are all connected and interdependent. Damage or decline in any one of them is cause for concern about the entire marine environment.

Nearly 25% of the seagrass beds on the Bermuda Platform were lost in the late 1990s (Murdoch et al. 2007) and this could have consequences for other marine habitats. Loss of seagrass beds leads to significant changes in the physical and chemical characteristics of the marine and coastal environment resulting in sediment erosion, decreased water transparency, and impaired nutrient cycling. These changes can lead to eutrophication, reduced nursery capacities for juvenile fish and shellfish, death of coral reefs, and loss of essential food for endangered green turtles.

quality across the Bermuda Platform. This enables resource managers in Bermuda to relate specific water quality measures to the status of benthic habitats. It also allows managers to reliably predict the consequences of proposed marine developments and of ongoing environmental change, such as sea surface warming, to the valuable marine resources of the Bermuda platform.

The ***Benthic Habitat Mapping and Monitoring Programme*** runs on a 5 year cycle in order to provide a long term view of changes and variability.



Therefore, in 2006 the Department of Conservation Services initiated the ***Benthic Mapping and Monitoring Programme***. This is a long term, synoptic programme that includes surveying benthic habitats and assessing water

References
Murdoch et al. 2007. Mar. Ecol. Prog. Ser. 339: 123-130.

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GOVERNMENT OF BERMUDA

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