Rocky Shore HAP

Objectives

1. To reduce the water pollution coming from becks and other water outlets on the shore
2. To reduce the litter washed up and left on the shore, whilst maintaining the shore's natural strandline which is rich in invertebrates and vital for many coastal bird
3. To conduct regular surveys of the effects on the shore of coastal defences, sewage treatment works and climate change
4. To raise public awareness of these important biodiverse habitats

Introduction

Rocky shore occurs along most of the North York Moors' coastline, especially around the headlands. (NB Littoral sediment is largely confined to the Esk estuary in Whitby, which is outside of the boundaries in this plan, the Scarborough BAP covers this area.) At Robin Hood's Bay the shoreline and inshore waters are part of a Site of Special Scientific Interest (SSSI) and a Sensitive Marine Area, noted for its important algal biotopes. Monitoring the diversity of rocky shores will give important information on the effects of coastal defence works and climate change.

Rocky shores represent a complex and unique habitat. The character of the shore is dependent on the underlying rock as the erosive forces of waves wear down the softer rocks, leaving the harder rocks exposed. The profile of the shore is related to the strata formation. The exposed rock provides a secure surface for organisms such as seaweeds, mussels, limpets and barnacles to attach themselves. These creatures are adapted to tolerate the stresses of their environment, including tidal flooding and desiccation twice a day. On exposed rocky shores the physical pounding of the waves is a major stress which places a limit on species diversity, whereas sheltered rocky shore species do not suffer the same extremes. Different levels of the shoreline are subjected to varying degrees of tidal movement with particular species relevant to each level. The middle shore has the greatest diversity of species; the lower shore is the most prolific.

The presence of rock pools, gullies, crevices, boulders and other topographical changes on rocky shores provide refuges for less tolerant organisms and consequently increase biodiversity. Predators on the rocky shore, such as various species of gull, sandpiper, and other waders are dependent on the success of the secondary producers for their survival in this environment.

Approximately 34% of the UK coastline features rocky shores which range from the wave-exposed headlands of the Atlantic coasts to the sheltered algae-covered shores of sea lochs. Although UK rocky shore habitat is not in decline, it is a unique, biodiverse habitat well worth protecting.

Progress (2008-2012)

- The Robin Hoods Bay Inter-tidal zone was surveyed in 2008/09. Three other inlets were surveyed in 2009. In 2012 Runswick Bay and Scarborough was surveyed as part of SEASEARCH MCZ scheme. Cleveland Potash Ltd. also provided the NYMNPA with a survey from Saltburn to Sandsend (2001). Shore Thing surveys are carried out by volunteers at Sandsend and Saltwick. See **Case Study** below for more details.
- Local Beachwatch groups run annual clean ups along our coastline in conjunction with Marine Conservation Society. Several active groups undertake adopt a beach and beachwatch campaigns on a regular basis and volunteers are directed towards these groups, for more info visit www.mcs.org.uk.
- A targeted approach by local groups (set up by NYMNPA in 2005) as part of a Beachwatch campaign identified litter 'hotspots' and organised ten beach litter picks and other clearance where necessary.
- Four Blue Flag Awards have been achieved for our beaches by working with Scarborough Borough Council and the Tidy Britain Group, the Environment Agency (EA) and others. Yet some of our beaches are unfortunately failing this due to water quality issues, these are being addressed via the EA, Yorkshire Water, Catchment Sensitive Farming and NYMNPA. Copies of EA Water Quality monitoring are available from the Coastal Officer.
- Five guided walks were led on the rocky shore in 2009 attracting over 80 people. Further walks were by NT/ NYMNPA education staff to raise awareness, and to highlight the importance of rocky shores.
- To ensure that Heritage Coast Objectives are taken into account in any proposals for shoreline defence projects the Heritage Coast officer sits on the Shoreline Management Plan (SMP) panel , which covers coastal and flood defence issues, so is aware of proposals for defence works. The Officer is consulted on any proposals for shoreline defence as part of the coastal forum (Heritage Coast objectives and management plan are available at www.coastalforum.org.uk.)
- Respond to the Water Framework Directive was sent in as part of NPA response.

Case Study

Rocky Shore Surveys

By John Beech, NYMNPA Coastal Officer and Heritage Coast Officer

In 2008 / 09 the National Park Authority issued a contract to survey four key areas along the Heritage Coast. Robin Hood's Bay, Cloughton Salt Pans,Crook Ness and Hayburn Wyke.

Robin Hood's Bay was surveyed for species and species diversity that occurred on the rocky shore within the Sensitive Marine Area (SMA) between Maw Wyke Hole and Beast Cliff. The transects followed the previous transect lines set by the sub aqua survey in 1999 continuing a natural line from the 30m bathymetry mark to the base of the cliff. This gave a detailed account of the make-up of the shore and intertidal wildlife it contains.

Cloughton Salt Pans, Crook Ness and Hayburn Wyke were chosen for their close proximity to each other and the relatively sheltered nature of the shore and inlets. Detailed reports are held by the Heritage Coast Officer.

Surveys at Sandsend and Saltwick Bay have been undertaken by volunteers co-ordinated by the Heritage Coast Officer and results are sent in to the Plymouth Marine Laboratory and are available on the shore thing website www.mba.ac.uk/shore_thing.

All of the rocky shore projects were undertaken to give baseline information and data about the National Parks coastline. The intention was to resurvey each area every five years to detect signs of change relating to sea temperature and invasive species.