

HABITAT MAPPING IN THE MARINE NATURE RESERVE

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A great deal of work has been undertaken in the Marine Nature Reserve (MNR) to identify the marine habitats and wildlife present and to investigate the biology of particular species. As a result we have a good description of what marine communities Lundy supports. However, we do not have a full picture of the extent of these habitats because most of the previous work has been based on particular localities. There have been attempts to map the extent of various habitats by extrapolating between particular points surveyed (see Hiscock 1983 reproduced in English Nature 1994). However, recent developments in the use and trialling of technology for mapping the seabed have made a comprehensive survey of the MNR more feasible. It was therefore considered timely to commission such a survey in support of managing the MNR, including to accurately describe the extent of the reefs around Lundy, the feature for which it has been proposed as a candidate Special Area of Conservation under the EU Habitats Directive.

A mapping survey was undertaken from July 15th-19th 1996 inclusive by a team based at Newcastle University with help from Scottish Natural Heritage, who provided a sophisticated remotely operated video, and English Nature. The whole reserve seabed was mapped and from this a map of the extent of different habitats produced. This still involves some extrapolation between points or transects at which data is collected and therefore needs to be interpreted with care. Nevertheless, the survey gives the clearest picture of Lundy's seabed yet recorded including a 3D image of its topography (see Plate 1, at rear).

The survey confirmed that the reefs around Lundy support a diverse range of communities, and were found in inshore areas around the whole of the island. Off the west coast reefs extend offshore, and on the east coast steep reefs and pinnacles support rare species, namely the seafan *Eunicella verrucosa* and sunset coral *Leptopsammia pruvoti*. The reefs on the east coast do not extend offshore to the same extent as those on the west coast, but the terrain is more dramatic with frequent vertical or sheer faces. The seafloor levels out offshore where the seabed becomes more homogenous and is dominated by sediments. Further details are provided in the survey report (Sotheran and Walton 1997).

The survey brought additional benefits with a new site for the sunset coral on the west coast, some good quality underwater video footage - and we were fortunate to be accompanied by basking sharks for most of the week!

REFERENCES

English Nature, 1994. *Managing Lundy's Wildlife; a management plan for the Marine Nature Reserve and Site of Special Scientific Interest*. English Nature: Peterborough.

Sotheran, I. & Walton, R. 1997. Broad scale biological mapping of Lundy Marine Nature Reserve with particular reference to reefs. *English Nature Research Reports* 231. English Nature: Peterborough.