UK Biodiversity Action Plan
Priority Habitat Descriptions

Maerl Beds

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Maerl Beds

This habitat description has been adapted from the 1994 UK BAP Action Plan for Maerl (https://webarchive.nationalarchives.gov.uk/20110303150139/http://www.ukbap.org.uk/UKPlans.aspx?ID=40), and would benefit from an update.

Correspondence with existing habitats

OSPAR habitat: Maerl beds
Habitats Directive Annex I: Large shallow inlets and bays & Sandbanks which are slightly covered by seawater all the time.

Description

Maerl is a collective term for several species of calcified red seaweed. It grows as unattached nodules on the seabed, and can form extensive beds in favourable conditions. Maerl is slow-growing, but over long periods its dead calcareous skeleton can accumulate into deep deposits (an important habitat in its own right), overlain by a thin layer of pink, living maerl.

Maerl beds typically develop where there is some tidal flow, such as in the narrows and rapids of sea lochs, or the straits and sounds between islands. Beds may also develop in more open areas where wave action is sufficient to remove fine sediments, but not strong enough to break the brittle maerl branches. Live maerl has been found at depths of 40m, but beds are typically much shallower, above 20m and extending up to the low tide level.

Maerl beds are found off the southern and western coasts of the British Isles, north to Shetland, but are particularly well developed around the Scottish islands and in sea loch narrows, around Orkney, and in the south in the Fal Estuary. Maerl beds also occur in other western European waters, from the Mediterranean to Scandinavia.

The distributions of the three main maerl bed-forming species in the UK are not entirely clear because of problems with identification in the field. *Phymatolithon calcareum* occurs throughout British waters, while *Lithothamnion glaciale* is a northern species with its southern limits at Lundy in the Bristol Channel and in the North Sea, off Yorkshire. *Lithothamnion corallioides* has caused the most problems with identification, but appears to be a south-western species with Scottish records as yet unconfirmed. Currently, it is known to occur in less than 15 of the ten km squares for the UK as defined by JNCC.

Maerl beds are an important habitat for a wide variety of marine animals and plants which live amongst or are attached to its branches, or burrow in the coarse gravel of dead maerl beneath the top living layer. Maerl beds, because of the wide geographical range over which they occur, have a wide range of associated animals and plants, with species diversity tending to be greater in the south and west. Due to the fragility of maerl, the beds are easily damaged and have probably declined substantially in some areas.

Relevant biotope

Only one biotope is associated with this habitat: SS.SMp.Mrl – Maerl beds

Current and potential threats

- *Commercial extraction* for use as a soil conditioner on acidic ground, as an animal food additive, for the filtration of acid drinking water and in pharmaceutical and cosmetic products.
- *Scallop dredging* has been identified as the biggest impact on maerl beds of both maerl, by breaking and burying the thin layer of living maerl, and the associated species. Other

types of mobile fishing gear are also likely to damage the living layer of maerl on top of the bed.

- *Heavy anchors and mooring chains* could cause considerable damage to maerl beds.
- *Eutrophication*, which causes smothering of the maerl by excess growth of other seaweeds and increased sedimentation.
- *Finfish farms* nutrient and chemical discharges that can affect the fauna associated with maerl beds may be affected.
- *Obstruction to water flow* building of barrages, causeways and bridges are potential blockages to water flow, particularly in sea lochs and between islands causing fine sediment particles to accumulate between the maerl fragments and smother the bed.

Edited by Nikki Chapman, JNCC