



UK Biodiversity Action Plan Priority Habitat Descriptions

Carbonate Mounds

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Carbonate Mounds

This habitat description has been adapted from the OSPAR habitat description (2005) (<http://www.ospar.org/work-areas/bdc/species-habitats>: definition available through the linked text 'case reports')

Correspondence with existing habitats

- OSPAR habitat: Carbonate mounds
- Habitats Directive Annex I: not covered

Description

Carbonate mounds are very steep-sided mounds of variety of shapes, which may be up to 350m high and 2km wide at their base (Weering *et al*, 2003). They occur offshore in water depths of 500–1100m with examples present in the Porcupine Seabight and Rockall Trough (Kenyon *et al*, 2003). Carbonate mounds may have a sediment veneer, typically composed of carbonate sands, muds and silts. The cold-water reef-building corals *Lophelia pertusa* and *Madrepora oculata* which form colonies up to 30cm high, as well as echiuran worms are characteristic fauna of carbonate mounds. The solitary coral *Desmophyllum cristagalli* and the octocoral *Stylaster* sp. were also occasionally present and nearby areas of cobbles and small boulders provided a surface for settlement of individual coral colonies (Wilson & Vina Herbon, 1998). Where cold-water corals (such as *Lophelia*) can also be (occasionally) present on the mound summit, coral debris may form a significant component of the overlying substratum. The branching structure underlying dead coral can provide a surface for settlement which was also elevated from the seabed and was extensively colonised by sponges, bryozoans, hydroids, soft corals, ascidians, calcareous tube worms, zoanthids, crinoids and bivalves. Other species that can be present include; large eunicid worms and sipunculids, *Ophiactis balli* (ophiuroid), *Astarte* sp (bivalve), cerianthid anemones and caridean shrimps (Wilson & Vina Herbon, 1998).

There is currently speculation on the origin of carbonate mounds, with possible associations with fault-controlled methane seepage from deep hydrocarbon reservoirs, or gas-hydrate dissociation (Henriet *et al*, 1998) through to the debris from 'cold-water' coral colonies such as *Lophelia*.

Relevant biotopes:

- EUNIS Classification: A6.75
- Marine Habitat Classification scheme v 4.05 – not covered

Current and potential threats

- *Demersal trawling operations*. Fishing activity is very intensive in some of the areas where mounds occur and repeated trawling does not allow time for the continual growth of coral colonies. Recovery may therefore only be possible over a long period of time, if at all.

References

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