

Deep-sea sponge aggregations

EUNIS code: A6.62

National Marine Habitat Classification for UK & Ireland code: Not defined

Deep sea sponge aggregations are principally composed of sponges from two classes: Hexactinellida and Demospongia. They are known to occur between water depths of 250-1300m (Bett & Rice, 1992), where the water temperature ranges from 4-10°C and there is moderate current velocity (0.5 knots). Deep-sea sponge aggregations may be found on soft substrata or hard substrata, such as boulders and cobbles which may lie on sediment. Iceberg plough-mark zones provide an ideal habitat for sponges because stable boulders and cobbles, exposed on the seabed, provide numerous attachment/settlement points (B. Bett, *pers comm.*). However, with 3.5kg of pure siliceous spicule material per m² reported from some sites (Gubbay, 2002), the occurrence of sponge fields can alter the characteristics of surrounding muddy sediments. Densities of occurrence are hard to quantify, but sponges in the class Hexactinellida have been reported at densities of 4-5 per m², whilst 'massive' growth forms of sponges from the class Demospongia have been reported at densities of 0.5-1 per m² (B. Bett, *pers comm.*). Deep-sea sponges have similar habitat preferences to cold-water corals, and hence are often found at the same location. Research has shown that the dense mats of spicules present around sponge fields may inhibit colonisation by infaunal animals, resulting in a dominance of epifaunal elements (Gubbay, 2002). Sponge fields also support ophiuroids, which use the sponges as elevated perches.

See OSPAR Agreement 2008-07 for references