



UK Biodiversity Action Plan Priority Habitat Descriptions

Sabellaria alveolata Reefs

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***Sabellaria alveolata* Reefs**

This habitat description has been adapted from the 1994 UK BAP Action Plan for *Sabellaria alveolata* reefs and therefore would benefit from an update: <https://webarchive.nationalarchives.gov.uk/20110303150051/http://www.ukbap.org.uk/UKPlans.aspx?ID=32>

Correspondence with existing habitats

Habitats Directive Annex I: Reefs

Description

Sabellaria alveolata reefs are formed by the honeycomb worm *Sabellaria alveolata*, a polychaete which constructs tubes in tightly packed masses with a distinctive honeycomb-like appearance. These reefs can be up to 30cm or even 50cm thick and take the form of hummocks, sheets or more massive formations. Reefs are mainly found on the bottom third of the shore, but may reach mean high water of neap tides and extend into the shallow subtidal in places. They do not seem to penetrate far into low salinity areas. Reefs form on a variety of hard substrata, from pebbles to bedrock, in areas with a good supply of suspended sand grains from which the animals form their tubes, and include areas of sediment when an attachment has been established. The larvae are strongly stimulated to settle by the presence of existing colonies or their dead remains. *S. alveolata* has a very variable recruitment and the cover in any one area may vary greatly over a number of years, although in the long term reefs tend mainly to be found on the same shores.

In Britain, *S. alveolata* reefs are found only on shores with strong to moderate wave action in the south and west, between Lyme Bay on the south coast of England and the Scottish coast of the Solway Firth. The reefs have also been found on parts of the Northern Ireland coast. The British Isles represent the northern extremity of the range in the north-east Atlantic, which extends south to Morocco. The reefs also occur in the Mediterranean.

Individual worms have a lifespan of typically three to five years, and possibly up to nine years, but reefs themselves may last longer as a result of further settlement of worms onto existing colonies. Typically in the first two years or so, after a heavy intertidal settlement, there are few associated species. Over time, seaweeds including fucoids, *Palmaria palmata*, *Polysiphonia* spp, *Ceramium* spp, *Enteromorpha* spp and *Ulva lactuca*, and animals including barnacles, dogwhelks, winkles, mussels and other bivalves such as *Nucula nucleus*, *Sphenia binghami* and *Musculus discors*, colonise the reef. Small polychaetes such as *Fabricia stellaris*, *Golfingia* spp and syllidae predators may occur within the colonies. Blennies, small crabs (*Carcinus maenas*) and other crustacea (such as *Unicola crenatipalma*) can be found within crevices. Older reefs may increase the biodiversity and stability of what would otherwise be sand abraded rocks and boulders. Sheet-like reefs may restrict drainage of the shore, creating rockpools where there would otherwise be none. Less is known about subtidal communities.

In Britain, *S. alveolata* forms well developed reefs over much of its range. The most numerous and extensive areas occur on the Cumbrian coast, particularly between the Morecambe Bay and the Solway Estuary and at Dubmill Point. Reefs are also found in Cardigan Bay and in the Bristol Channel, including the coasts of south Wales, north Devon, Somerset and Avon. Very extensive subtidal reefs occur in the Severn Estuary, and subtidal populations have also been reported in the Walney Channel (Morecambe Bay) and from Glassdrumman, Northern Ireland.

There is evidence of a significant contraction in range on the south coast of England over a period of at least 20 years until 1984. Declines have also been reported in the western part of the north Cornish coast, the upper parts of the Bristol Channel and in North Wales and the

Dee Estuary. Causes have not been postulated and it is difficult to assess the true significance of these changes given the natural variability of the species. For example, *S. alveolata* reefs have recently developed off Heysham (in Morecambe Bay), dominating two hectares of boulder scar from where it had been absent for 30 years.

Relevant biotopes

LS.LBR.Sab – Littoral Sabellaria honeycomb worm reefs

SS.SBR.PoR.SalvMx – *Sabellaria alveolata* on variable salinity sublittoral mixed sediment

Current and potential threats

- *Cold winters / climate change*: *Sabellaria alveolata* reefs are at the northern end of their range in Britain and are affected by extremely cold winters, after which they may die back for many years, particularly at higher shore levels.
- *Prolonged burial* will cause mortality. But can tolerate burial for a period of days or even weeks
- *Accumulations or losses of sand* as a result of shoreline development, which is the major cause of loss in parts of Europe. These developments may have positive or negative effects depending on the nature of the changes.
- *Trampling damage* by beach users and extraction of the worms for angling bait both occur, but on a limited and local scale.
- *Competition for space with common mussels *Mytilus edulis** occurs, especially on boulder scars, but factors influencing this are unknown. Heavy settlement of mussels on *S. alveolata* reefs has been suspected of causing short-term destabilisation and loss of habitat.
- *Variable recruitment*: *S. alveolata* is naturally subject to very variable recruitment, but the factors influencing this are not fully understood. Lack of larval supply and wave exposure is thought to be an important factor in the general absence of reefs on Anglesey and near to major peninsulas such as south-west Cornwall, Pembrokeshire and the Lleyn Peninsula.

References

<https://webarchive.nationalarchives.gov.uk/20110303145223/http://www.ukbap.org.uk/Habitats.aspx>

Edited by Nikki Chapman, JNCC