

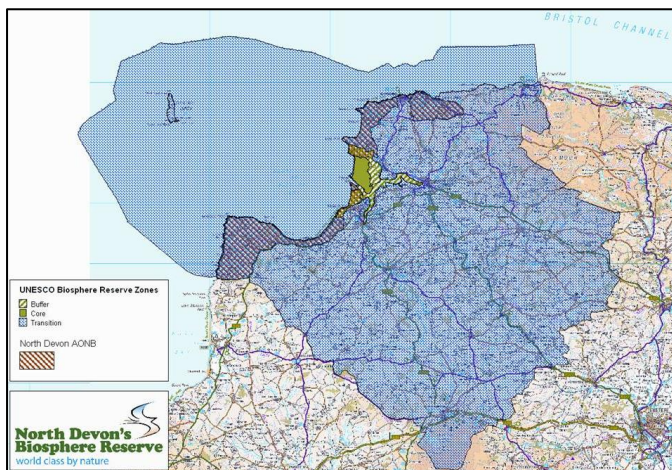
Devon and Severn IFCA News

Survey of Subtidal Mussels in the Taw-Torridge Estuary

Devon and Severn IFCA collaborates with local fishermen to undertake mussel survey in the Taw-Torridge estuary

The Taw-Torridge estuary is located on the north Devon coast, within the North Devon Coast Area of Outstanding Natural Beauty and the North Devon UNESCO Biosphere Reserve. The estuary is an important site for wildlife and has been designated as a Site of Special Scientific Interest (SSSI).

Photo: The location of the Taw Torridge Estuary (shown in yellow) within the North Devon Biosphere Reserve and the North Devon Coast AONB. (Taw Torridge Estuary management Plan, 2010)

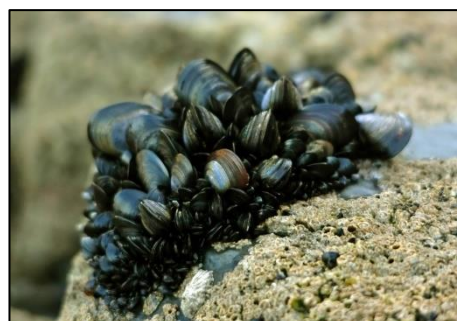


Mussel beds play an important role in the healthy functioning of marine ecosystems, including the Taw-Torridge estuary. Mussels are an important food source for wading birds, as well as animals such as starfish, crabs, fish and whelks. Mussel beds also provide important habitat, harbouring diverse communities in areas that are otherwise dominated by sediments. Mussels are filter feeders, feeding on micro-algae, suspended debris and zooplankton, and play a vital role in estuaries by removing bacteria

and toxins. Mussels can also provide an important source of income to fishers and mariculturists around the UK. These benefits are examples of the valuable 'ecosystem services' provided by mussels.

Photo: Blue mussel, *Mytilus edulis*, on a rock in the intertidal zone.

However, the health and persistence of some UK mussel beds are under threat from pressures such as commercial and recreational fishing and hand-gathering, poor water quality, coastal developments and anchoring. In the Taw-Torridge area, there is also local concern that subtidal mussel beds may be prone to scouring and disintegration overwinter, particularly during periods in which the strong local tidal movements coincide with high freshwater input from the rivers Taw and Torridge.



D&S IFCA carries out annual stock assessments of intertidal mussels in the Taw-Torridge estuary. The results of the 2019 survey are available [here](#). However, the extent and density of the subtidal mussel resource in the Taw-Torridge system has not previously been assessed, though the subtidal mussel may play an important role in reseeding intertidal areas, providing

food and habitat for local wildlife, and performing other important ecosystem services. It is therefore important to assess the subtidal resource, and consider future management options.

Photo: Satellite image of Taw-Torridge estuary (copyright Google Maps).



On 23rd October 2020, D&S IFCA's Senior Environment Officer worked with two local fishermen to conduct a broad-scale survey of the estuary. This survey used a device known as a Van Veen grab, deployed from a local fishing vessel, to take samples of the estuary bed from the Crow Point/ Coolstone area through the main channel to the estuary mouth. Sample areas were guided by important fisher knowledge of the local environment. The objective of this project was to define the location of subtidal mussel beds, ground-truthing and updating local knowledge of mussel distribution. The contents of all Van Veen grab samples were assessed for mussel presence, abundance and mussel length. Results of this survey have expanded D&S IFCA's understanding of the subtidal mussel resource, which will help to inform future management of local mussel beds and the development of shellfisheries in this part of the D&S IFCA's District.

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