The Making of Ynyslas: communicating change through the visual impact of a drowned landscape

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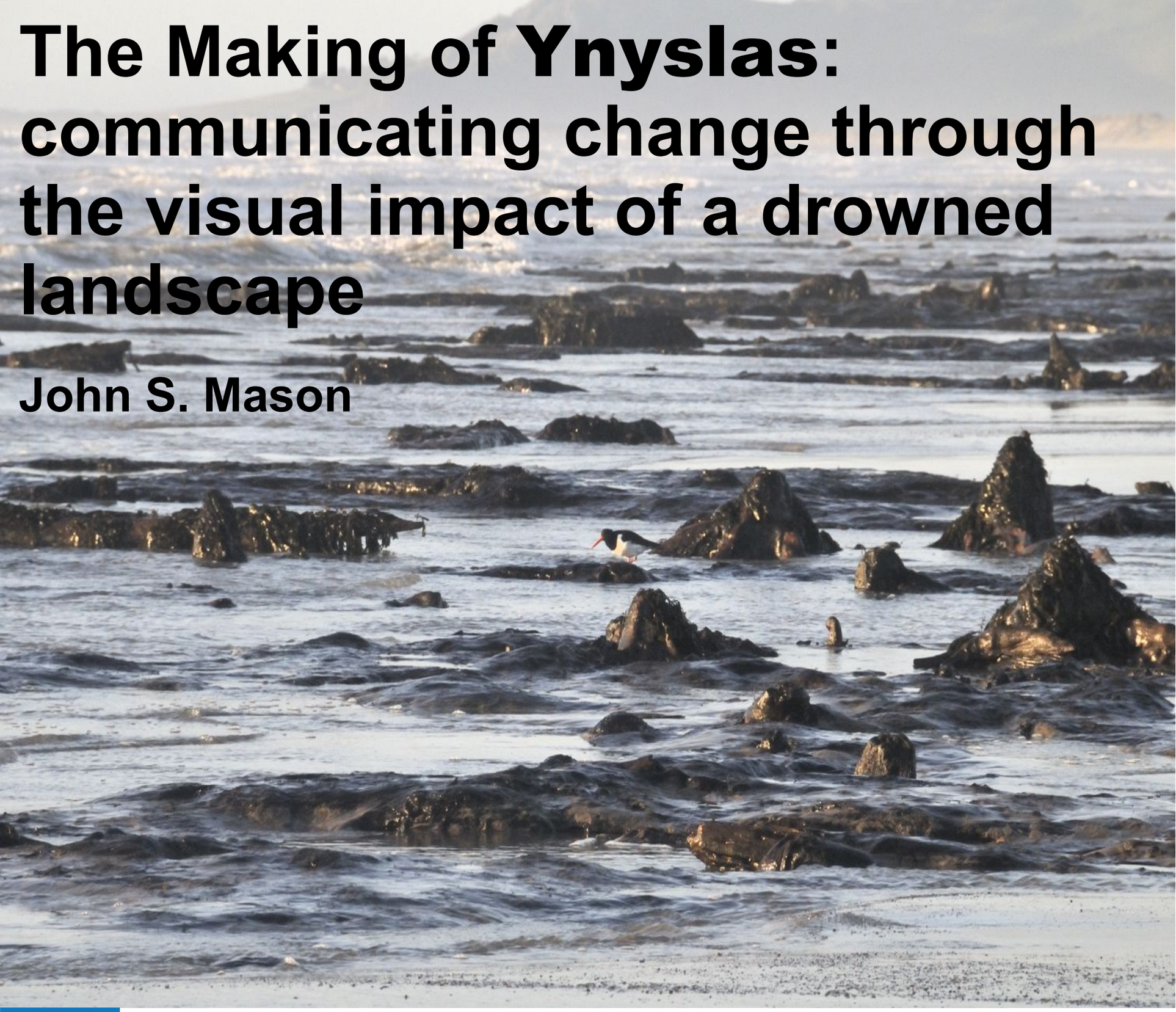

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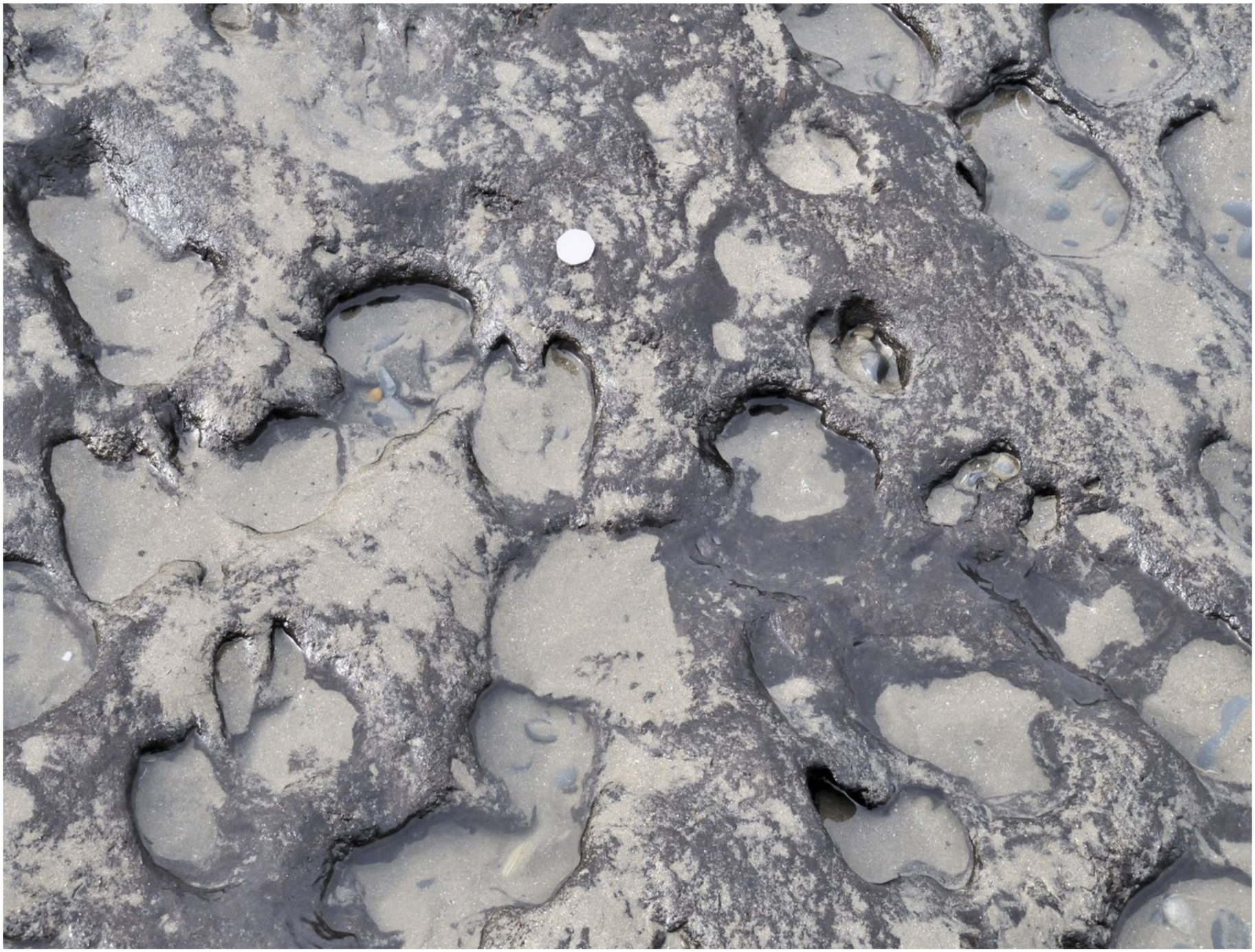
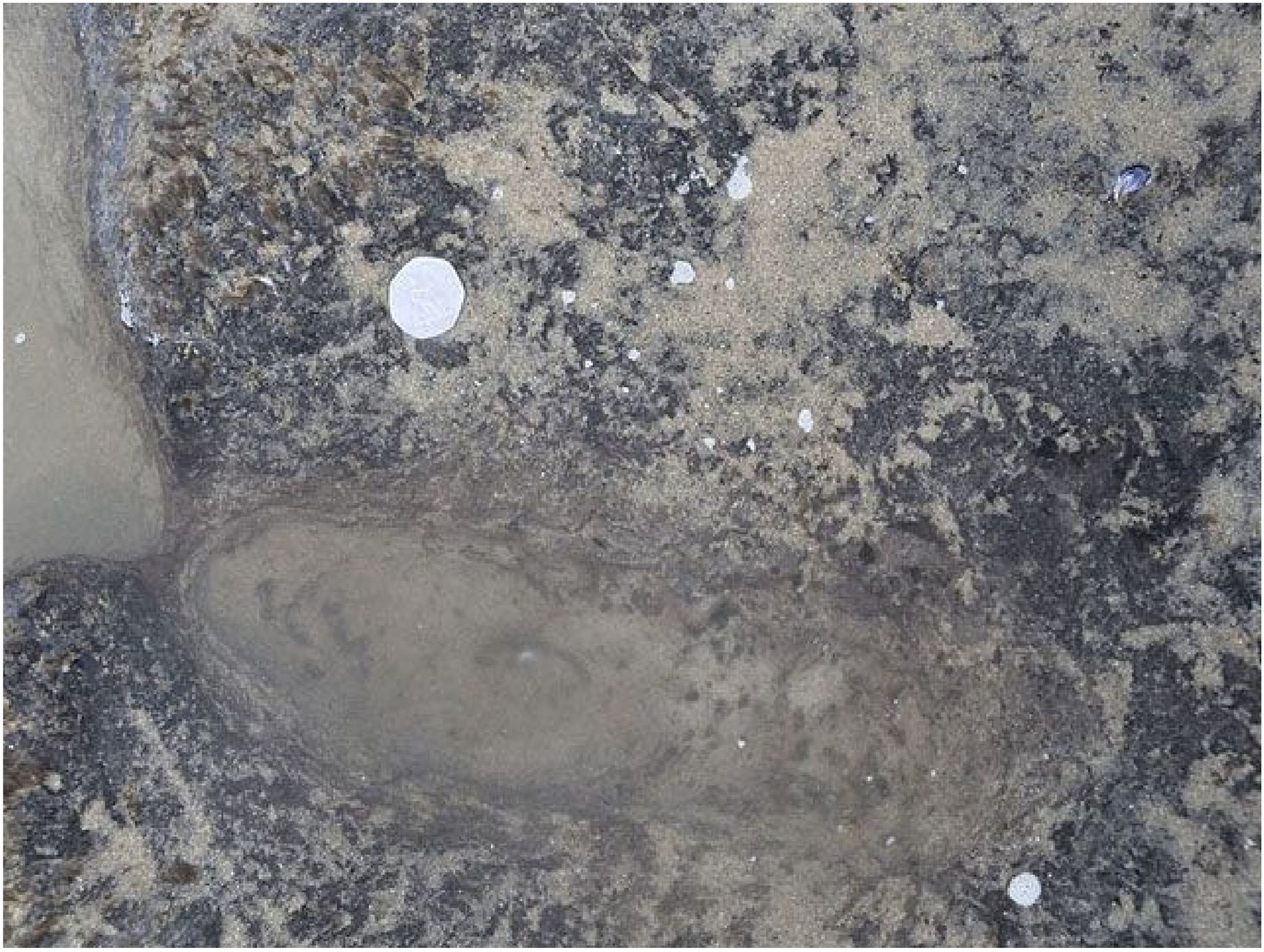
The Submerged Forest at Borth-Ynyslas is ~6,000-3000 years old (from radiocarbon dating) and presents one of the starkest possible demonstrations of past climate change.

Its exposure varies over the seasons but is best after winter storms have heavily scoured the sands. Spring tides at low water are the best times to visit.



In 2012 and 2014, severe storms revealed areas of compacted peat with hoof-marks, plus burnt stone-scatters typical of the early Bronze Age, 4,150-3000 years ago. These are in an upper peat-bed.



...human footprints have been recorded too

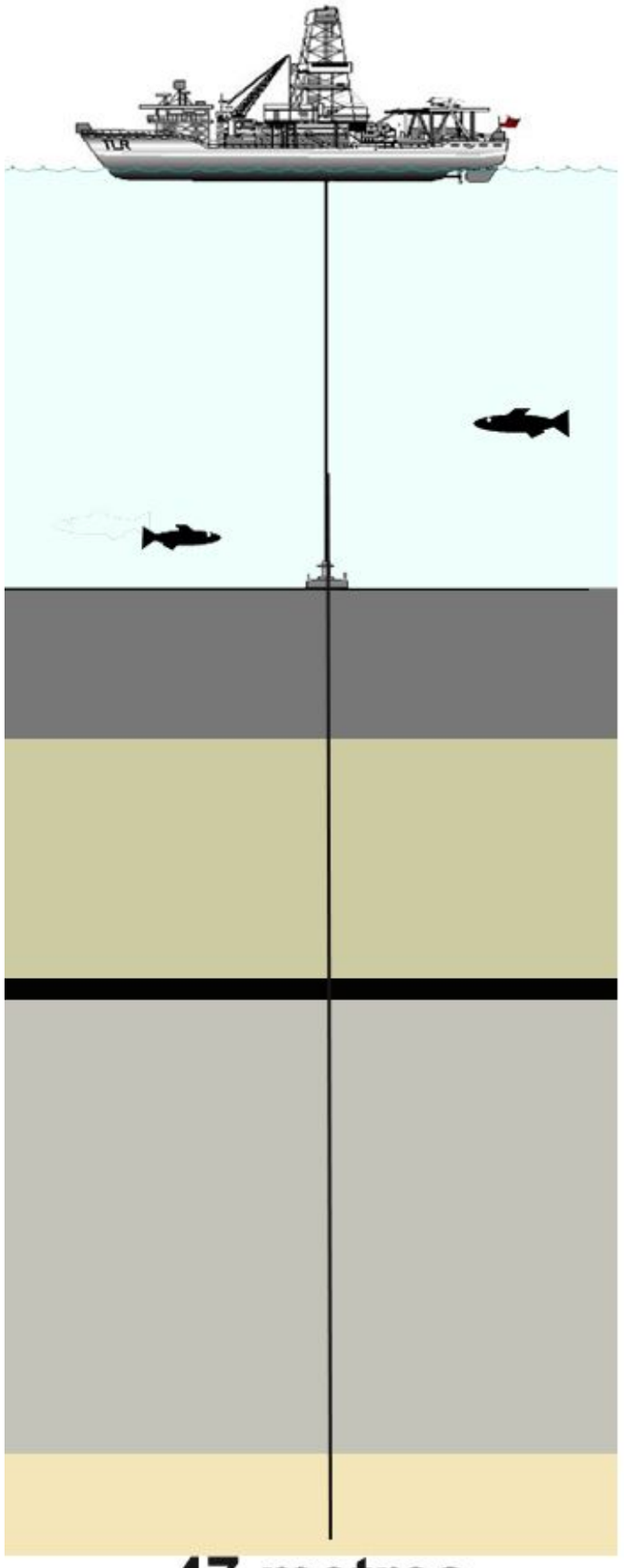
Offshore in Cardigan Bay, many boreholes have been drilled both for research and oil/gas exploration. No wells have gone into production – but as a consequence we now understand the Bay's geology well.

Much of the Bay is floored by Mesozoic rocks, upon which lie thick accumulations of both reworked sands/gravels and original glaciogenic diamicton.

Due to that reworking, only a small fraction of offshore borehole logs record the interception of similar woody peat-beds to the one exposed on Borth Beach, for example in BGS BH71/57, situated some 15km NW of Ynyslas.

Extensive reworking of the glacial and Holocene sediments in this shallow bay probably explains this scarcity.

BGS BOREHOLE BH71/57, September 1971



20 metres

Muddy clay

Sand

Peat, with wood fragments

Boulder clay - glacial deposits

Middle Jurassic limestone

47 metres

A hydrocore hole further to the SW in Cardigan Bay, off New Quay, passed through similar woody peat ca. 20 metres beneath sea-level. Radiocarbon dating gave an age of 8740 B.P.

All of Cardigan Bay is evidently a drowned landscape and the Submerged Forest at Borth-Ynyslas provides an accessible example of that.

It is a profound experience to watch the flooding tide pushing in, the incoming waves swirling around the ancient tree-stumps as the sun sets.

Drowned landscapes like this facilitate our task of communicating the effects of climate change. They also rebut the popular myth, "*the climate's always changed*", by presenting the opportunity to counter with: "**and look what happened**".

https://skepticalscience.com/ynyslas.html